

FY 2002 Superintendent's Annual Report

Glen Canyon National Recreation Area

and

Rainbow Bridge National Monument



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I MANAGEMENT

Kitty Roberts remained as Superintendent and completed the SES Candidate Development Program this year. In October 2001, Deputy Superintendent Kayci Cook-Collins swapped positions with Bill Pierce, the Alaska Desk Officer in Washington, D.C. Char Obergh continued in her position as Management Assistant.

Use of personal watercraft (PWC) was a major issue at Glen Canyon in FY02. PWC were to be banned on Lake Powell effective September 15, 2002 but that deadline was extended to November 7, 2002. This ban is the result of a NPS ruling regarding PWC use within the NPS system and a subsequent court settlement agreement with Bluewater Network. Park staff and contractors spent a considerable amount of time and effort working on a PWC Draft Environmental Impact Statement and promulgating a Proposed Rule to manage future use. Public response to the impending ban was quite vocal; several 1st Amendment and special use permits were issued for petition drives and a large rally protesting the ban.



PWC Rally at Wahweap

Management continues to focus attention on carbon monoxide (CO) poisonings associated with open air boating incidents. Glen Canyon staff were the first nationwide to publicly recognize the potentially fatal problem associated with carbon monoxide and rear exhaust designs on some houseboats. Park personnel continue to educate and inform visitors and potential visitors to the dangers associated with CO. In April, Glen Canyon NRA was recognized for its efforts to educate visitors regarding CO poisoning with the NPS Andrew Clark Hecht Memorial Public Safety Achievement Award.

The development of the Antelope Point Marina also continued to be a primary focus for park management's time. After release of the prospectus in October 2000, GMF Antelope, LLC, was selected as the developer for the project. The Environmental Assessment representing the developer's proposal for the development of Antelope Point was completed this summer. The Navajo Nation approved the business site lease and the NPS Director was expected to sign the concession contract in early January 2003.

A lawsuit filed over management policies at Rainbow Bridge National Monument was resolved in April 2002. The Natural Bridge and Arch Society had filed the lawsuit claiming such policies, particularly concerning visitor access to Rainbow Bridge, violated the Establishment Clause and the Equal Protection Clause of the 1st Amendment of the U.S. Constitution. Judge Bruce S. Jenkins of the U.S. District Court for the State of Utah ruled for the National Park Service stating that its visitation policy "does not coerce visitors into practicing the Native American religion...".

In July 2002, Intermountain Regional Director Karen Wade approved the FONSI for the Wahweap Wastewater Management Upgrade. With the environmental assessment and associated compliance completed, an agreement was negotiated with the City of Page to connect the Wahweap wastewater system via pipeline to the City of Page's Wastewater Treatment Plant. The federally funded project will bring wastewater operations at Wahweap back into compliance with State of Arizona environmental regulations, protect water quality, and help the City of Page operate its existing wastewater treatment facility more efficiently and economically.

A Business Plan for Glen Canyon NRA and Rainbow Bridge NM was completed in FY02. This planning process was undertaken to accomplish three tasks: (1) to provide the park with a synopsis of its funding history; (2) to present a clear, detailed picture of the state of current park operations and funding; and (3) to outline park priorities and funding strategies.

During the year, management met with congressional representatives from both Arizona and Utah to update them on park issues. Additionally, park orientation sessions were provided for approximately 15 congressional staffers.

We continue Tri-County annual meetings with southern Utah county commissioners and sheriffs, as well as attending county commission meetings at least three times per year. Likewise, we have made semi-annual presentations to the Coconino County supervisors in Arizona.

Park management continues to emphasize both employee and visitor safety with monthly Central Safety Committee meetings. The Central Safety Committee is comprised of the superintendent, deputy superintendent, management assistant, superintendent's secretary, and division chiefs. As the safety officer position remained vacant this year, Bill Pierce has taken the lead on park safety.

SPECIAL PARK USES

Marianne Karraker continued in the position of Special Park Uses Coordinator for Glen Canyon NRA. Additionally, seasonal Interpretive Ranger Pat Talbott provided assistance in monitoring permits on several occasions.

The permits program witnessed a topsy-turvy year in FY 2002. While filming in the park was down with 27 film permits issued compared to 37 last year, there was a marked increase in the number of special use permits issued (51 compared to 29 in FY 2001).

Twenty-seven film permits were issued in FY 2002, one of which was subsequently cancelled. Commercials and advertisements continue to generate the most filming at GLCA. Projects included the following:

- ? Feature film segments from Columbia Pictures and Universal Studios
- ? Personal watercraft commercials and ads for Honda and Kawasaki
- ? ABC Television's "The Batchelor"
- ? Various travelogues and documentaries particularly aimed at foreign audiences
- ? Numerous fashion and product shoots

Locations included the Wahweap developed area, Lone Rock, Gunsight and Padre Canyons, Coyote Gulch and the Escalante, Antelope Point, Romana Mesa, Rainbow Bridge National Monument, Navajo and Labyrinth Canyons, the San Juan, Bullfrog, the Colorado River and Lees Ferry.

There were 60 permitted shooting days in FY02 with a total film permit cost recovery of \$12,319.75. This is in stark contrast to FY01 which saw 133 filming days and \$57,717.00 in cost recovery.

Those with insight into the filming industry blame the current state of the economy for the down turn in filming in the region. Crews traveling from Europe and Asia find the United States to be very expensive. U.S. based crews are wanting to scrimp as much as possible. Additionally, the Arizona Film Commission, which has greatly encouraged filming at Glen Canyon NRA, is essentially being shut down by budget cuts at the state level.



Filming at Lake Powell

Fifty-one special use permits were issued in FY02, four of which were cancelled. Permitted activities included the following:

- ? 6 fishing tournament schedules
- ? 19 church services, baptisms, and weddings
- ? 7 community group, youth group or school activities
- ? 3 search & rescue type training sessions
- ? 3 four-wheel-drive safaris
- ? 8 activities associated with 1st Amendment Rights
- ? 1 wagon trek reenactment

The program saw a dramatic increase in the number of permits issued for weddings. This was due in part to better communication with the local justices of the peace and ministers. The number of permits issued for 1st Amendment activities 'skyrocketed'. Two such permits were issued to a group protesting the existence of the Glen Canyon Dam and the proposed marina to be built at Antelope Point. The remainder of these permits were issued to groups concerned with the proposed ban (now in effect) of personal watercraft brought about by a lawsuit filed by the BlueWater Network.

There were 136 permitted activity days associated with special use permits in FY02. Locations utilized included the Wahweap developed area (particularly the picnic area and swim beach), Lone Rock, Wahweap and Warm Creek Bays, Hole-In-The-Rock Road, the Colorado River, and Bullfrog.

Total special use permit cost recovery was \$6,651.74.

Effective January 1, 2002, monitoring fees increased from \$50/hour to \$80/hour. Charges for the use of Vessel 222 during monitoring were increased to \$50/running hour. The increased fees reflect the first adjustment in cost recovery for the program since 1995.

In addition to coordinating special park use permits, Marianne also serves as an EEO counselor and took the lead on Glen Canyon's PWC outreach team which formulated and carried out a plan to educate and inform visitors, businesses, and other agencies about the PWC issue at Glen Canyon.

EQUAL OPPORTUNITY COMMITTEE

Chris Cook was named chairperson with the departure of Donna Faucett due to retirement. Three new EO Counselors were selected and trained: Ken Coss, Eileen Martinez and Marianne Karraker. Recruitment efforts continue in order to fill several vacancies left by out-of-park transfers and several new members were inducted into the EO Committee.

The EO Committee met on a periodic basis as needed throughout the year to address issues brought before it and to find proactive methods to promote Glen Canyon's EO principles and policies. In addition, various members of the committee attended other meetings and training sessions to become more knowledgeable about current EO policies and procedures. This information was then shared with the park employees.

Members of the committee also represented Glen Canyon NRA at different venues for job recruitment:

- ? Members of the committee participated in Career Days at the Coconino Community College, Page High School and Tuba City High School. Students had the opportunity to explore career opportunities and learn about the application process.
- ? Members of the committee represented Glen Canyon NRA at several regional boat shows (Denver, CO; Las Vegas, NV; Phoenix, AZ; and Salt Lake City, UT) providing recruitment information to the public.

Mandatory EO sexual harassment training was presented to the employees of Glen Canyon NRA, both permanent and seasonal, in six separate sessions. This meets the requirement for training specified in our Affirmative Action Plan.

The EEO Committee continues to function as a vital part of management's effort to ensure equal opportunity issues are in compliance and are actively pursued. Together, we strive to assure the staff are trained, educated, and informed about the EO policies of the park, NPS, and the federal government.

LAKE POWELL WATER SAFETY COUNCIL

The Lake Powell Water Safety Council (LPWSC) established in January 2000, is a consortium of public and private partners organized to share information and combine efforts in visitor safety. The council met regularly through the year and accomplished a variety of projects.

With \$5000 dedicated to Council efforts from the NPS and monies contributed from the Lake Powell Yacht Club, ARAMARK, and the local radio station; the visitor of the week award, an updated CD of Public Service Announcements and ski flags were purchased. Attendance at two boat shows was also funded for proactive safety outreach.

Through the forum of the LPWSC, water safety weekends took place in conjunction with "operating under the influence" (OUI) checkpoints. The Arizona Game and Fish boating educator class was brought to Page courts, with Council members as instructors. Due to

cooperation between agencies, data collection was more effective. Members also participated in the International Coastal Cleanup Day/National Public lands Day event.

The LPWSC continues to bring the public and private sector to the same table to establish a unified message for visitor and employee safety. The meetings have also provided a medium for management issues and actions to be communicated to all partners.

II ADMINISTRATION

ACQUISITION AND PROPERTY MANAGEMENT

Acquisition

Contracting activity for Glen Canyon NRA during FY02 is shown in the table below:

Glen Canyon NRA FY02 Contract Totals	23 total contract actions including contracts, contract modifications and agreements
Contract Awards - - Total	\$4,316,247.00
8(a) Awards	\$1,737,131.00
Percentage 8(a) Awards -- Total	40.25%
8(a) Awards without \$1.1 million Cooperative Agreement to the City of Page	54.01%

Four Indefinite Delivery, Indefinite Quantity Task Order (IDIQ) contracts were awarded in FY02 using the procedures outlined below. Ten proposals were received with four contracts awarded to the following: Lake Powell Construction & Development of Page, Arizona; Munchiando Excavating, Inc. of Wheat Ridge, Colorado; Brown Bros. Construction of Loa, Utah; and Harward & Rees of Loa, Utah.

This procurement consisted of one solicitation with the intent to award three or more Indefinite Delivery, Indefinite Quantity (IDIQ) Construction Contracts to the responsible offerors whose proposals, conforming to the Request for Proposal (RFP), would be most advantageous to the Government and result in the Best Value, cost or price and other factors considered. The contracts would be for a base period of one year with four one-year option periods. The Government reserves the right to award less than or more than three contracts under this solicitation. The total maximum value for the base term and all options for the aggregate of all IDIQ contracts awarded as a result of this RFP shall not exceed \$15,000,000. The IDIQ work will be routine construction, alteration, repair and minor architecture/engineering of facilities - including fully functional facilities at various National Park Service areas in the states of Arizona, New Mexico, Utah, and Colorado. The first IDIQ construction contract of the three or more was awarded with a firm fixed price for the replacement of fire hydrants lake wide at Glen Canyon National Recreation Area as the seed project. The estimated price range of the seed project is \$250,000 - \$500,000. Projects assigned to these IDIQ contracts will use the Task Order Concept (TOC) approach to scope and price the work. After award of the initial contracts, each awardee will be provided a fair opportunity to be considered for each task order, except under those circumstances described in FAR 16.505 (b) (2). Construction

schedules will be determined for each project at the issuance of each task order. The work will be routine renovation, alteration, repair, construction and minor architecture/engineering of facilities including: residential and non-residential buildings, site work, roads, parking areas, boat launch ramps, marina and docks, campgrounds and utilities and utility systems necessary to provide fully functional facilities. In the case of minor task orders, the contractor may be given a brief performance specification and will be required to submit either a one step or two step design/build approach with the proposal. All contractors will competitively bid on task orders. These projects will be non-complex performance oriented tasks requiring minimal design. They will be scoped by the government/contractor team and may not have traditional plans and specifications but may include sketches and requests for catalog cuts or other submittals. The salient requirements of the Task Order will be scoped by the government/contractor team in order to develop a mutually agreed upon statement of work. Award factors will vary depending on the unique requirements for each task order and may be competed on the basis of price, best value or technically acceptable, low-price selection procedures. The Government will assess the capability of each offeror on the basis of (1) its organizational experience, (2) its organizational past performance, (3) qualifications and experience of key personnel, the capability of its specified critical subcontractors and (4) its demonstrated ability to comply with instructions. The Government will not assess capability on a pass/fail basis, but will use its assessments of capability as a basis for comparing offerors to determine best value. Best value receives the seed project with award; 2nd, 3rd, and any additional selected contractor will each receive award with a minimum guarantee of \$50,000 for the base year. All contractors will competitively bid on subsequent task orders.

Property Management

Property management functions during FY02 were only partially completed due to the position being vacant until September 2002.

AIRCRAFT SERVICES

Glen Canyon took delivery of a new Cessna 206 to replace the 1985 model Cessna 206 the park had operated since that date. The new aircraft is equipped with a digital radio for government operations, an integrated TCAD and GPS system for enhanced flying safety, a SAR homer to aid search and rescue efforts, and an AirCell telephone to improve communications with law enforcement and dispatch activities.



N2PS

The replaced Cessna 206 is parked at the Page Airport awaiting congressional action to transfer the airplane to the Kane County (UT) Sheriff's Office. This is being authorized in the FY03 Appropriations Bill.

Flying activities during FY02 included 606 flight hours. In-park aviation training focusing on management, basic aviation safety, and hazardous materials was provided.

BUDGET, FISCAL, PAYROLL, AND TRAVEL

At the beginning of FY02, the duties for preparation of Travel Authorizations and completion of Travel Vouchers for temporary duty travel (TDY) was turned over to division secretaries. The Administrative Support Assistant prepares travel vouchers for permanent change of station (PCS) travel, maintains the Travel Manager program, applies software updates and serves as the park Travel Coordinator.

Glen Canyon started using the new administrative finance system AFS-3 in March. Training was provided on the new system for all program managers and users.

The Fiscal Clerk continued to manage the airplane scheduling, scheduled GSA Fleet vehicle service and repairs, and tracked vehicle recordkeeping and utilization. After the budget meeting in December 2001, six GSA vehicles were returned to GSA.

Sources and amounts of funding for FY02 for Glen Canyon National Recreation Area were as follows:

Glen Canyon Nation Recreation Area (Fund 01)

\$ 9,292,900	Operation of the National Park Service
31,000	Seasonal Sanitarian
25,000	Water Related Impacts
20,000	Restore Riparian Area
10,000	ARPA Funding

10,000	Drug Funding
4,800	VIP Program
6,000	VIP Safety (2 radios)
10,000	Spill Prevention Control
20,000	Integrated Solid Waste Plan
5,000	Pesticide Storage Facility
29,100	Chains Area Assessment
50,000	Halls Crossing Corrective Action
<u>21,300</u>	Wahweap Wells abandonment
\$ 9,535,100	Subtotal

SAR Accounts (Fund 01)

\$ 1,314	Torres SAR
582	Black SAR
1,108	Holder SAR
1,673	Ford SAR
1,295	Herman SAR
1,403	Wiscomb SAR
4,769	Ferrera SAR
1,063	Munson SAR
555	Curtis SAR
1,819	Naylor SAR
562	Tarrant SAR
534	Norris SAR
1,275	Moore SAR
4,312	Phivault SAR
3,074	Flannery SAR
3,141	Niederhauser SAR
919	Rivers SAR
4,275	Shaller SAR
<u>12,770</u>	Kidder SAR
\$ 46,443	Subtotal

Special Park Use (Fund 01A)

\$ 50,545	IBP Permits
19,171	Filming Permits
<u>68,118</u>	Construction Set-Aside
\$ 137,834	Subtotal

Equipment Replacement (Fund 05)

\$ 82,500	Replace 19' Almar Jet Boat
<u>55,037</u>	Replace Backhoe Loader
\$ 137,537	Subtotal

Repair/Rehab (Fund 07)

\$	41,825	Sewage System Odor Control
	59,472	Replace Sewage Flow Meters
	249,241	Rehab Fire Hydrants
	20,508	Replace Failing Water System
	<u>54,289</u>	Emergency Utility Services
\$	425,335	Subtotal

Federal Highway Funding (Fund 44)

\$	<u>200,000</u>	Recon Portions of FR 276 Halls Crossing
\$	200,000	Subtotal

Line Item Construction (Fund 05)

\$	<u>1,100,000</u>	Sewage System Connection Fee
\$	1,100,000	Subtotal

Quarters (Fund 34)

\$	296,044	Permanent Quarters
	<u>50,448</u>	Temporary Quarters
\$	346,492	Subtotal

Reimbursable Accounts (Fund 06)

\$	34,857	Banner Health Services
	920	Riparian (USGS)
	23,889	Environmental Compliance (BOR)
	3,110	Old High Water Zone (BOR)
	153	Monitor Grazing (USGS)
	4,488	Trace Monitoring (USGS)
	14,921	Logistical Support for Lake Powell Water Quality Program (BOR)
	1,459,955	Security for Glen Canyon Dam (BOR)
	14,666	Water Income, Non-Concessioner
	5,049	Electric Income, Non-Concessioner
	532,632	Water Income, Concessioner
	<u>395,468</u>	Electric Income, Concessioner
\$	2,490,108	Subtotal

Fee Demo Projects 20% (Fund 25)

\$	18,300	Spencer Trail Rehab
	<u>1,173</u>	Accessible Beach Access
\$	19,473	Subtotal

Fee Demo Projects 80% (Fund 25)

\$	12,523	Prospectus Development Wahweap Visitor Services
	332,442	Water Quality
	19,289	Invasive Plant Control
	7,862	History of Glen Canyon NRA
	5,009	Action Plans
	23,949	Graffiti Removal
	37,500	USGS Side Canyon Studies
	734,996	Cost of Collection
	110,768	Cost of Collection Capital Equipment
	3,576	Upgrade Exhibits
	8,726	Outreach Program
	46,300	Carbon Monoxide Brochures
	16,396	PWC Survey and Planning
	237,000	Lone Rock Paving
	311,982	Dangling Rope Photovoltaic Batteries
	162,881	Paving at Antelope Point
	10,000	Replace ROV Sonar System
	<u>20,480</u>	Cost of Collection Utilities & building maintenance
\$	2,101,679	Subtotal

Rainbow Bridge National Monument

\$	103,000	Rainbow Bridge NM (ONPS)
	<u>1,000</u>	VIP Program
\$	104,000	Subtotal

GRAND TOTAL of all funding sources for FY02 was **\$16,080,832.**

INFORMATION MANAGEMENT AND TELECOMMUNICATIONS

The Information Technology and Telecommunications branches were combined during FY02. The purpose of this reorganization was to align the IT/Telecom branch with rapidly changing technology and to provide more depth to both IT and Telecommunications services throughout the park.

An automated work request system was also instituted for IT/Telecom problems. A summary of over 891 divisional work orders follows:

Management	24
Administration	94
Concessions	63
Fees	80
Interpretation	105
Facilities/Maintenance	133
Resource Management	219
Visitor Protection	135
Navajo National Monument	37

Because the preponderance of work items consists of discrete work tasks, the following summary of support to the parks (GLCA, RABR, and NAVA) is provided:

- ? Completed conversion from ccMail to Lotus Notes.
- ? Created web based calendars for the Fee division and for room and projector scheduling.
- ? Updated design of the GLCA Local web page.
- ? Modified the Remote Operated Vehicle (ROV) to accept a digital sonar unit.
- ? Installed additional wiring in several locations to provide connectivity for user computer systems.
- ? Revised the GLCA Information Technology Plan.
- ? Programmed voicemail mailboxes and provided user training as needed.
- ? Set up satellite training broadcasts as needed and available.
- ? Presented training to all personnel as required on new radios, new computer systems, software, telephones and systems, and associated equipment.
- ? Installed 1.544 mbps frame relay service for data in Headquarters to increase Internet access speed and support for Lotus Notes.
- ? Set up post-September 11th dam security communications and portable repeater.
- ? Conducted audit of removed services from AT&T to ensure disconnects and stop billing to the department. Installed Virtual On Net long distance services for telephones at Hite and Lees Ferry.
- ? Wrote and updated costs for new 2002 Telecom Plan.
- ? Installed voice mail at NAVA.
- ? Audited telephone services at NAVA and removed two trunk lines that were more than required for the business size. The site now has three incoming and three outgoing trunks for the telephone system.
- ? Expanded 800 services on all PBX's in the park to include 855, 866, 877, and 888 prefixes.
- ? Installed telephone cable in Resource Management area expansion and new offices for Interpretation. Maximum stations on PBX exceeded for the first time.
- ? Audited payphones and services in park. The park has 65 payphones from various vendors.
- ? Coordinated computer and telephone moving and changes required for the Headquarters office renovation.

- ? Attended training and assisted with installation of the new Vesta E911 system in Dispatch.
- ? Dispositioned complaints about interference on the primary park channel at Fee entrance booths. Discovered that security cameras were producing enough noise to open receivers on park radios.
- ? Programmed the first digital radio in the park and installed in new park airplane.
- ? Coordinated with and provided requirements to GSA for new site in Navajo Mountain.
- ? Installed telephones, voice mail, and data services for the Natural History Association office at Headquarters.
- ? Installed voice mail for Bullfrog and for Halls Crossing.
- ? Installed a wireless and a satellite data system at NAVA.

HUMAN RESOURCES

The Human Resources branch has full delegated authority to classify, staff and process actions for employees through the GS-14 and all Wage Board positions in the park. Authority has also been granted to the park to propose and decide disciplinary and adverse actions.

The branch has been impacted with vacancies for both Human Resources Assistant positions. Margaret Grassle has been on extended leave since December of 2001 due to illness. The other Human Resources Assistant position was vacant much of 2001 and was filled in March 2002 with Mary Jensen. The Human Resources Assistant position is vital to the park since that person enters all personnel actions for park employees including retirements, within-grade increases, performance, changes in tenure, benefits, and thrift savings plan.

The advent of a new paper timesheet this year has been successfully implemented with all employees responsible for filling out their own time. Since we expect to go to an automated system in the next year, the new system will make employees more knowledgeable about pay codes and will also allow them to better track their overtime, annual, sick, and comp and credit time.

Plans for reorganization of Fees, Interpretation, and Concessions has begun with input from all divisions. Human Resources has begun changing position numbers and the park's Table of Organization commiserate with organizational changes proposed. The branch also continues to support the staffing and recruitment needs of Navajo NM.

The workload continues to increase because of the changes to the organization and the turnover rate of employees in Glen Canyon NRA and Navajo NM. Despite the workload increase and the position vacancies, the branch has been able to meet due dates, maintain reports, ensure that employees were paid, and complete personnel actions in a timely manner.

Recruitment and Staffing

Thirty-two permanent positions were filled (including those with EOD's known through 10/01/2002):

PARK RANGER (P-WW) (PFT) 01	STEPHEN CLARY	10-01-
PARK RANGER (P-WW) (PFT) 01	BRANDON WEATHERMON	10-01-
PARK RANGER (P-WW) (STF) 01	LINDEN SCHLENKER	10-01-
DEPUTY SUPERINTENDENT 01	BILL PIERCE	10-07-
SECRETARY (INTERP) (P/T) 01	LISA DITTMAN	10-07-
CRIMINAL INVESTIGATOR 01	BRIAN O'DEA	10-07-
PARK RANGER (P-BF) (PFT) 01	DAVID SCHNEIDER	10-15-
PARK RANGER (P-BF) (STF) 01	GREG KOUNS	10-15-
DISPATCHER 01	ROB WILLIAMS	11-04-
INFORMATION RECEPTIONIST 01	JONI SEAY	11-04-
PARK RANGER (P-WW)(PFT) 02	ERIK LARSON	02-24-
DISPATCHER 02	JOE ANDERSON	02-24-
PARK RANGER (P-ESCAL)(SDR) 02	DAVID BAUER	03-10-
PARK RANGER (P-WW)(PFT) 02	JARED ST. CLAIR	03-10-
ADMIN SUPPORT ASSIST (BF) 02	LISA ANN GREEN	03-10-
ENGINEERING EQUIP OPERATOR (BF) 02	BILLY KELLEY	03-10-
HUMAN RESOURCES ASSISTANT 02	MARY JENSEN	03-24-
ECOLOGIST (AQUATIC) 02	MARK ANDERSON	03-24-
MAINTENANCE WORKER (WW) 02	BECKY SESSIONS	03-24-
PARK RANGER (P-WW)(STF) 02	JULIE YUCKER	03-24-
PARK RANGER (P-BF)(STF) 02	JASON BAUWENS	03-24-

PARK RANGER (P-DR)(STF) 02	BRIAN BLOOM	03-24-
PARK RANGER (P-DR)(STF) 02	KEVIN MACLEAN	03-24-
PARK RANGER (P-HITE)(STF) 02	JASON GASKIN	04-21-
PARK RANGER (P-BF)(STF) 02	KATHY LLOYD	05-19-
MAINTENANCE WORKER (WW) 02	FRED COLBURN	06-02-
PARK RANGER (P-WW)(STF) 02	JIM NICHOLS	06-16-
PARK RANGER (I-DR)(STF) 02	ANNE MAKER	06-23-
SUPV PARK RANGER (P-BF)(SDR) 02	LAURIE AXELSEN	07-14-
PARK RANGER (P-WW)(STF) 02	MATTHEW FISHER	07-28-
PARK RANGER (P-HX)(PFT) 02	ELAINE SMITH	08-11-
REVENUE & FEE ANALYST (PFT) 02	JOSIE SWEENEY	08-25-
PURCHASING AGENT (PFT) 02	CELESTE NICHOLS	09-08-
MAINTENANCE MECHANIC (BF)(PFT) 02	KENNETH COSS	09-08-

Office of Workers Compensation Program

In 2002 there were 18 new on-the-job injury claims processed. Of these, 16 accidents resulted in no lost time. There were 16 lost time hours during this period, for which two injuries accounted for all lost time.

Incentive Awards

Glen Canyon National Recreation Area presented the following awards to employees:

Time-Off Award	7
Star Award	38
Quality Step Increase	1
Non-Monetary Award	4

Personnel Actions

Since the Human Resource branch supports Glen Canyon National Recreation Area, Rainbow Bridge National Monument and Navajo National Monument, there were a wide

variety of actions accomplished amounting to over 2,500 actions processed covering a full range of personnel processing.

Drug Testing

All drug testing of permanent and temporary employees was completed and negative results were established for all employees tested.

Employee Development

Training courses offered at Glen Canyon this year included:

- DOIMOCC (Motorboat Operator Certification)
- Fee Collection Training
- Law Enforcement Refresher
- EMT and IEMT Refreshers
- Search and Rescue
- Seasonal Orientation for all Divisions
- Structural Fire
- Critical Incident
- Safety Courses/Exercises
- CPR and First Aid
- Dive Training

III CONCESSIONS MANAGEMENT

This year was a challenging one with the two goals of finalizing the contract for the Antelope Point project and beginning work with a third party, PricewaterhouseCoopers, to develop the prospectus for the Downlake Contract. In order to accomplish these tasks, Chief of Concessions Kathy Fleming was reassigned to the Superintendent's office from April through August to concentrate her efforts on these two contract issues. In her absence, a detail for the Acting Chief of Concessions was advertised and filled. Barclay Trimble, from WASO Program Center, assumed the detail from the first of April to mid-May and Cheryl Schreier, Bryce Canyon National Park, served from mid-May to the end of August.

With due diligence by Kathy Fleming, concessions contract for Antelope Point was finalized and forwarded to the developer, Antelope Point Holdings, L.L.C., for signature. Upon signature, the contract will be forwarded to the Washington Office for the 60-day Congressional review period.

Additionally, the Navajo Nation Business Site Lease was also completed and forwarded for signature. A Bridge Agreement between the Navajo Nation and the National Park Service for the administration of the Antelope Point Project area within Glen Canyon NRA and the Navajo Nation is being finalized for signature by the Director, the Intermountain Region, and the President of the Navajo Nation.

The next few years will be an exciting time for Glen Canyon NRA as we begin construction of the new marina in conjunction with the Navajo Nation and Antelope Point Holdings, L.L.C. This project has been a goal for both the National Park Service and the Navajo Nation for many years.

CONCESSIONS AUTHORIZATIONS/CONCESSIONER

ARAMARK Sports and Entertainment Services, Inc., d.b.a. Lake Powell Resorts and Marinas, CC-GLCA003-69 (Downlake)

The Concessioner has satisfactorily fulfilled the requirements of the Contract/Permit compliance program as identified in NPS-48, chapter 22 including the "Special Attention Items," Maintenance, Utilities, Accounting Records and Reports, Franchise Fees, and Insurance.

Work continues on a new contract package. Glen Canyon has contracted with PricewaterhouseCoopers (PwC) to assist us in developing our new contracts prospectus package.

ARAMARK staff continued to communicate with the Concessions office regarding homeless boat program issues, commercial activities including unapproved advertising,

boat brokering and other shared concerns. ARAMARK continues to take a proactive approach to recycling and their efforts pay off in tremendous results.



Low-water parking area

Lower lake levels resulted in ARAMARK looking for options for providing accessibility to visitors at Stateline Boat Rentals and the Wahweap Marina. Low-water parking areas, such as pictured above at Wahweap, were stabilized and used to provide accessible parking, loading and unloading for park visitors. A free porter service was implemented at Stateline for transporting visitor's supplies to rental boats.

ARAMARK continues to provide a wide range of visitor services, i.e., lodging, food service, boat rentals, half and all-day boat tours, RV/campground, gift and sport shops, and a full spectrum of marina services.

The park received very few complaints this season; the comments that were received focused primarily on chase boat services, slip rates and tour boat wakes.

The restroom project at Rainbow Bridge National Monument and Phases I, II, and III of the Wahweap Campground/RV Park construction project were completed thus offering more facilities and services to our visitors.

ARAMARK Sports and Entertainment Services, Inc., d.b.a. Wilderness River Adventures, CC-GLCA001-93

The concessioner continued providing visitor services this year under an extension. The Colorado River Recreation Management planning was suspended because of another priority planning project (PWC). When resumed, information obtained from the plan will be used in developing a prospectus.

Downlake Concessions Specialist Jacki Blais attended training this year for Category III Concessions Contracts to provide her the expertise necessary to develop the prospectus for this contract next year.

Because of security measures instituted post-September 11th at Glen Canyon Dam (BOR), Wilderness River Adventures staff continued to face the challenge of providing transportation to and from Lees Ferry for their river trips. Beginning May 11, 2002, trips were once again permitted access to the river through the Bureau of Reclamation's tunnel.

In FY02, a total of 34,849 passengers enjoyed the guided interpretive river trips on the Colorado River through Glen Canyon to Lees Ferry. Backhauling services were provided to 37 kayak/canoe/dory boat customers. A small number of comments were received regarding rates charged for backhauling services.

The Franchise Fee 80% Account that produces funds for projects was used almost exclusively for prospectus development, continuation of Colorado River planning, and servicing the restroom facilities along the Colorado River.

Arizona Department of Economic Security, d.b.a. Lake Powell Glen Canyon Gift Shop, CC-GLCA017-95

The services provided by the Lake Powell Glen Canyon Gift Shop (located in the Carl Hayden Visitor Center building) were satisfactory during the 2002 operating season.

The Lake Powell Glen Canyon Gift Shop continues to provide the visiting public with quality merchandise and an excellent array of Native American handicrafts. Interpretive themes are reflected throughout the shop in the merchandise being offered the visiting public.

Because of its location in the Carl Hayden Visitor Center, the gift shop was challenged with operations being disrupted by increased security issues.

ARAMARK Sports and Entertainment Services, Inc., d.b.a. Lake Powell Resorts and Marinas, CC-GLCA002-88 (Uplake)

Fee reconsideration negotiations went well this year with the National Park Service and ARAMARK reaching an agreement for a new fee to be initiated in 2002.

Construction projects included the first phase of a new campground at Bullfrog with 96 sites removed and replaced with 74 spacious sites for campers and new restrooms in all three loops. Also included was the first phase of employee housing with 16 new one- and two-bedroom housing units in the newly combined NPS and concessioner housing area. The new housing allowed for eight mobile homes to be removed from the existing housing area. Bullfrog Marina received a new retail store, executive services offices and restrooms at the covered slips. Hite Marina received a new marina store and water/sewer

upgrade. Halls Crossing received new restrooms at the covered slips and an electrical upgrade that will aid all operations.

Low water problems have had a significant impact on the concessioner's operations. The changing lake levels required continual relocating of docks and breakwaters and the addition of new anchors. The ferry docking stations for both Halls Crossing and Bullfrog had to be moved to the public launch ramps to allow this service to continue through the winter.

The area received two severe storms in September which destroyed roads, the new campground, parts of the concessioner's new housing area, damaged covered slips and several slip customer's houseboats, along with leaving deep gouges in the surrounding land. The campground has been redone by the contractor and is back to its original state.

Page Hospital, CP-GLCA021-94

The staff in the Bullfrog Medical Clinic extended the operating season by opening on weekends in April and by staying open several weekends after the normal closing date. The staff operated the clinic an extra 12 days this season. The patient load for the seasonal operation was 1,314 patients, 65 more than last year.

High Desert Adventures, CP-GLCA020-95

High Desert Adventures continues to operate within the park. A portion of its business has been relocated to just outside Page (AZ) allowing better access to the lake for customers and less travel time for employees. The special population trips were well received again this year.

INCIDENTAL BUSINESS PERMITS (IBP's)

The annual Business Partner's Workshop, formerly known as the IBP Meeting, was held in Page in February 2002 to recognize partnerships between the National Park Service, IPB's, and local community groups. The workshop provided specific informative presentations repeated throughout the day to allow smaller group interaction and opportunity for participants to attend presentations geared toward their specific interests or needs.

The Concessions Division initiated a successful Identification Badge (ID) program for IBP's that worked well with the new Commercial Permit program initiated by the Fee branch.

The launch and retrieval IBP was reviewed and broken out into three types: small, large, and manufacturer delivery. The Concessions staff kept informed of the proposed changes in the regulations for oversized loads for Arizona and Utah which may impact the activity of the launch and retrieval IBP's for large vessels. As of September 30th, we had four

houseboat manufacturers holding launch and retrieval IBP's for large vessel delivery, 16 IBP's for large vessels, and 13 for small vessels.

There was no change in the IBP fees for the non-refundable application charge of \$125 or the \$300 annual cost for IBP's issued prior to expiration dates. The application charge was implemented for those IBP's who did not apply for new permits prior to expiration dates. Clarification of conditions for the IBP's continues to improve as the program evolves. New Commercial Use Authorizations (CUA) regulations based on the 1998 law are still pending.

The Seasonal Sanitarian met with three of the backcountry operators to assist them in providing better food service through education on specific food sanitation and health issues. Annual inspection reports for those permittees all received satisfactory ratings.

Many IBP's felt the impact of September 11th as insurance companies narrowed or canceled the coverage previously provided for those services. Due to the increased insurance premiums, some IBP's changed the focus of their business operations and did not apply for as many permits or ceased conducting business entirely. The impact to the IBP program at Glen Canyon NRA was a loss of approximately \$10,000 of estimated revenue. The gross revenue collected and deposited for IBP's was \$52,345 which included \$2,525 carryover from FY01 and cost recovery of \$1,400 for ID Badges.

FY02 began with a total of 166 active IBP's and ended with a total of 148 as noted below:

<u>October 01</u>	<u>Incidental Business Permit</u>	<u>September 02</u>
35	Boat Caretaking	28
28	Incidental Boat Repair	27
14	Specialty Services	10
30	Launch & Retrieval (all types)	33
23	Fishing Guide Service	20
15	Hiking (w/ and w/o packstock)	13
2	Hunting Guide Service	2
1	Instruction (Water Ski/Wakeboard)	1
9	Kayak Instruction/Excursions	9
4	SCUBA	2
4	Land Tours	2
<u>1</u>	Salvage	<u>1</u>
166		148

IV INTERPRETATION

FY02 BUDGET

Glen Canyon ONPS	\$ 641,000
Rainbow Bridge ONPS	\$ 14,500
TOTAL, ONPS	\$ 655,500
Water Quality Interpretation (Fee Demo)	\$ 53,417
TOTAL, Other Sources	\$ 53,417
TOTAL, ONPS and Other Sources	\$ 708,917

STAFFING

8.6 permanent FTEs
6.5 temporary FTEs
15.1 total FTEs

The Chief of Interpretation position continued to be filled through acting designations. The primary Acting Chief, Glenn Gossard, began a detail as Acting Superintendent at Navajo National Monument late in the summer, requiring other positions to assume temporary acting roles. The Subdistrict Interpreter position at Rainbow Bridge was filled by Anne Maker in mid-June.

VISITOR CONTACTS

Carl Hayden Visitor Center	506,758
Navajo Bridge Interpretive Center	42,048
Bullfrog Visitor Center	6,564
Rainbow Bridge formal talks	4,620
Wahweap amphitheater programs	7,360
Defiance House	8,681
Petroglyph Panel	1,974
Roving assignments—general	109,962
Roving—lake water quality	18,158
Special events	4,604
School programs	2,482
TOTAL INTERPRETIVE CONTACTS	713,211

Interpretation continued to support the Critical Incident Stress Debriefing (CISD) program this year. Several interpreters were family liaison on incident fatalities. We also performed CISD's for NPS and local EMS providers.

VISITOR CENTERS

Carl Hayden Visitor Center (CHVC) at Glen Canyon Dam hosted 506,758 visitors during 2002, a drop of 29%. This was most likely due to broader and more stringent security measures that were implemented at the dam after September 11th. Tours of the dam, suspended after the September attacks, did not resume until early summer. The audio-visual program was viewed by 38,567 people. Carl Hayden Visitor Center is normally open year-round, with the exception of Thanksgiving, Christmas, and New Year's Day, with extended hours (8 a.m. – 7 p.m.) mid-May through mid-October.



Bullfrog Visitor Center saw 6,564 visitors during FY02, a slight decrease from the previous year. The visitor center was open intermittently in March. It was generally open full-time from April through August. Because of cost considerations, the Glen Canyon Natural History Association (NHA) only staffed the visitor center 4 days a week in September and weekends only in October. NPS staff tried to cover the extra

three days a week in September but was not always successful. The NPS still relies on the NHA to staff the visitor center. The NHA continues to struggle to find employees to work the entire season who also have housing. The visitor center retail operation does not support itself but is critical in orienting park visitors within the uplake district.

Navajo Bridge Interpretive Center (NBIC) hosted 42,048 visitors during FY02. The facility opened in mid-April and closed in mid-November. It was staffed 50% by NHA employees and 50% by GLCA seasonal interpreters. The NHA employed 2 maintenance and 2 bookstore staff. The NHA still does not make enough money from book sales to completely support this operation. Lees Ferry interpreters worked at Navajo Bridge frequently which allowed them to provide extra coverage at



NBIC.

COOPERATING ASSOCIATION

The Glen Canyon Natural History Association appears to have turned the corner during fiscal year 2002. Executive Director Lynn Thompson Baca reported that expenses had been carefully watched during the year and that gross profit was actually up slightly from the previous year, even though revenues were down. Considering the negative impacts to tourism in the region during the past year – economic downturn, security challenges subsequent to September 11th, and increasing competition – the NHA feels the year was quite successful.

The energies of the NHA were directed this year toward streamlining operations at the three primary outlets of Carl Hayden Visitor Center, the Navajo Bridge Interpretive Center, and the Bullfrog Visitor Center. However, the Ranger Contact Stations at Lees Ferry and Hite also received more attention from the NHA this year than in the past, particularly in terms of updated products and improved communication. Additionally, another small outlet was added at the National Park Service Headquarters Building in June.

The NHA increased aid to the National Park Service in FY02 largely in terms of staffing (e.g., much better support at the Bullfrog Visitor Center) but also in terms of contributions of books and materials.

The NHA sponsored a series of public lectures at the Carl Hayden Visitor Center during the off-season months (November through March). Topics have ranged across many facets of natural history (from geology to paleontology), as well as facets of human use of the Glen Canyon Region such as the politics of water and historic occupations.

In early FY02, funds from the Carl Hayden Visitor Center donation box were approved by the Bureau of Reclamation and the National Park Service for use in restoring the relief map at CHVC. Robert Miller, the creator of the map, returned to Page for three days during which he re-painted portions of the map, added features, and fixed damage. Unfortunately, during FY02, visitation at CHVC was down more than 25%, which equates to more than 100,000 visitors. Consequently, donations into the CHVC donation box were down substantially. A total of \$1,655 was collected during FY02.

The NHA has administered a grant from the Boat US Foundation that will pay for the layout and design of the Boating Laws, Rules & Regulations for Utah-Arizona Interstate Waters (Lake Powell) brochure. This is a combined effort by the Utah Division of Parks and Recreation, the Arizona Game and Fish Department, and the National Park Service. The brochure will be ready for distribution during the 2003 boating season.

The NHA also acted as a conduit for other NHA's in the region to provide \$12,000 in funding for the Navajo Nation's spectacular presence at the Olympics in Salt Lake. The

'Discover Navajo' pavilion was a tremendous success during the Olympics and should help in bolstering tourism to our region from around the world.

An established, successful relationship between the NHA and the National Park Service was enhanced this year by the inclusion of the NHA in the Glen Canyon National Recreation Area's Headquarters building. This arrangement helped the association with communication and finances. As part of the agreement to bring the NHA in-house, the NHA bought a phone upgrade that increased the phone capability of the building by 20 lines.

The NHA also works with the Bureau of Reclamation (BOR) to provide tours of the Glen Canyon Dam. Tours of Glen Canyon Dam, suspended on September 11th, resumed on June 19th after substantial security and tactical revisions to the program. More than 63,000 people actually took tours of the Glen Canyon Dam during FY02.

Gross FY02 sales at the Glen Canyon Natural History Association outlets were:

CHVC	\$215,877
BVC	7,887
Lees Ferry Ranger Station	281
Hite	268
Navajo Bridge Interpretive Center	59,518
NPS Headquarters	<u>905</u>
TOTAL	\$284,746

CHVC SUBDISTRICT

Carl Hayden Visitor Center staff included one permanent full-time supervisor; two full-time park guides; two seasonal employees, and two Student Conservation Association Volunteers (who alternated between working at CHVC and Wahweap Subdistrict).

2002 was a time of challenge at Carl Hayden Visitor Center with the advent of terrorist threats and high security procedures. National anxiety and enhanced security undoubtedly had an impact on our visitors, as evidenced by the severely reduced visitation. We limited that impact as much as possible with excellent cooperation and teamwork between the Bureau of Reclamation, the National Park Service, and the Glen Canyon Natural History Association

The staff at CHVC pulled together and continued to offer a superior visitor experience, while their supervisor, Rick Jones, was either the Acting Chief of Interpretation or the Acting District Interpreter for the majority of the year:

One seasonal position, based out of the CHVC, served as a NPS Interpretive liaison to the Wilderness River Adventures concession operation. CHVC and Wahweap staff provided interpretation on the river at a petroglyph panel several times each week. These personnel also assisted Wilderness River Adventures in interpretive training and program review.

Evening programs were provided 3-4 times per week during the summer season at the Wahweap Amphitheater in cooperation with the Interpreters from Wahweap Subdistrict.

Education programs were provided at Desertview, Lakeview, and Big Water elementary schools. Additional help was furnished to the Science Education Specialist as requested.

CHVC staff maintained the park library including reviewing and purchasing new books, inventory control, reshelving and cataloguing.

The CHVC Supervisor edited and published Glen Canyon Reflections, the park newspaper, with extensive help from all park staff.

The partnership between the NPS and the Bureau of Reclamation continues to strengthen. This has resulted in better communication, and significantly greater progress on the CHVC Exhibit Upgrade Project.

The CHVC Supervisor organized and instructed several Interpretive Competency classes for employees, our partners, and the Seasonal Law Enforcement Training Program at Northern Arizona University.

Informal interpretation was expanded at CHVC, in the surrounding area, and on the Glen Canyon Bridge with the introduction of 10-minute programs in non-traditional areas around the Visitor Center.

WAHWEAP SUBDISTRICT

Staff included one permanent full-time ranger, six seasonal rangers, one SCA, and four volunteers.

The Wahweap Subdistrict Interpreter (WW SDI), Eileen Martinez, wore many hats in addition to her regular duties. She was trained and certified as an EEO Counselor. This involves membership and participation on the park EEO Committee, coordination of the park's representation at area career days and providing 'Prevention of Sexual Harassment/EEO' training. Two EEO cases were assigned to her from the regional office.

The WW SDI also frequently served as acting Public Information Officer, as well as continuing to provide expertise in the field of Special Park Uses to the program coordinator.

She was also a member of the PWC outreach team that developed means and methods of communicating the PWC planning process and upcoming closure to the general public.

The WW SDI, as a team writer for the successful award of the Department of the Interior Andrew C. Hecht Memorial Safety Honor, showcased the houseboat model at the ceremony in Phoenix, AZ.

Finally, the WW SDI served a detail to Navajo NM to provide interpretive leadership, training and assistance in personal and non-personal interpretive services through the heavy visitor use season. She also served details in the park as acting Downlake District Interpreter and acting Chief of Interpretation.

The Downlake Water Quality patrol program was led by Interpretation in harmony with Protection, Resource Management and Maintenance. Joint patrols (Resource Protection and Interpretation) took place five times with great success. A new patrol form was developed to establish consistency in data collection lakewide.

The WW SDI managed National Public Lands Day event. About 35 volunteers joined in to remove graffiti from the sandstone and to install a new sign discouraging visitors from carving new graffiti into the rock.

The WW SDI directly supervised and managed the Graffiti Ranger and the Graffiti Removal and Intervention Program. This program entailed volunteer coordination, personal contacts, media development and close cooperation with Resource Management and Protection. (See Volunteer in Parks section).

Roving interpretation by staff occurred at Lone Rock Beach, the Coves, Picnic Beach, Horseshoe Bend, the Wahweap Lodge properties, and shoreline areas. Traffic control was maintained at the launch ramps on busy weekends. Visitor contacts focused on water quality, carbon monoxide poisoning prevention, visitor safety, and resource interpretation. Formal interpretive programs were presented at the Wahweap Lodge four times per week. Volunteers Vivian Firlein, Irv Kranzler and Seth Muller led interpretive jeep tours to Romana Mesa with great success.

The WW SDI chaired the Lake Powell Water Safety Council. This involved tracking projects funded by private/public partners, planning and running the Lake Powell Water Safety Council meetings (every other month), coordinating and distributing the 'Visitor of the Week' award and leading the outreach subcommittee. She collaborated with agency personnel and the NHA to complete the draft text and layout for the Boat US Foundation grant for the interagency boating regulation brochure.

Increasing emphasis was placed on having park personnel attend several boat shows in the area. The WW SDI coordinated NPS participation at 4 boat shows. Personnel attending the shows in Arizona, Utah, Colorado and Nevada provided information and interpretation, in addition to seminars. This participation continues to be one of our most effective and efficient communication tools.

LEES FERRY SUBDISTRICT

One seasonal employee staffed the Lees Ferry subdistrict.

Staff participated in daily roving at Navajo Bridge Interpretive Center, Paria Beach, the launch ramp, Lonely Dell Ranch, Lees Ferry Fort, and the campground. The Navajo Bridge Interpretive center was supported 5 days a week with staffing, lunch relief, and program oversight. Historic formal programs were provided to 20 Elderhostel groups, numerous school groups, and families.

Interpretive staff assisted with cleaning historic structures at the Lonely Dell Historic District. In the course of this activity, an object was discovered by the seasonal employee Allen Malmquist (working as a volunteer at the time). This object was a lead sheet with written text that may have a potential impact on the history of the area. This discovery resulted in extensive press coverage and ongoing interpretive programs. Tests are still underway to determine its authenticity.



The Lees Ferry object

Due to new information revealed through historic research and publications, it was necessary to design new exhibits to replace outdated or erroneous information. The Lees Ferry Walking Guide was revised and a new site bulletin was created.

Coordination with BLM (Paria/Vermilion Cliffs NM) is ongoing in efforts for signage and interpretive messaging and with the Peregrine Fund in interpreting the daily presence of California Condors at the Navajo Bridge Interpretive Center.

DANGLING ROPE/RAINBOW BRIDGE SUBDISTRICT

Staff included one subject-to-furlough ranger, Anne Maker, hired in June and two seasonal employees.

Formal interpretive programs and daily roving interpretive coverage were presented at Rainbow Bridge with occasional short-term shoreline roving.

Assisted with district SAR and EMS.

After much research and work by various individuals, new displays were finally placed at the shade dock at Rainbow Bridge. This has made new and more accurate information available to visitors.

BULLFROG SUBDISTRICT

Staff included one permanent District Interpreter, one lead seasonal and three seasonals.

The subject-to-furlough Subdistrict Interpreter position was not filled. This left the District Interpreter (DI), Max King, as the only permanent interpreter in the district.

The DI continued to serve as the park's webmaster. As the park's planning effort became more involved, more time was spent designing and updating pages associated with this activity. Assistance was provided in getting the Personal Watercraft Draft EIS on the website in a timely manner. During the peak interest period, we were experiencing more than 1000 hits per day on this subject alone.

Several new exhibits were designed and fabricated for both the uplake and downlake areas. New exhibits for the Halls Crossing station and the soon-to-be built Boat Rental office in Bullfrog, as well as for campgrounds park-wide, were designed. These exhibits relate to area history, visitor safety, natural history, and resource education and protection.

Coordinating the uplake water quality program continued to be a priority. As always, many challenges presented themselves. We were able to secure a different boat which was somewhat more reliable than 241. It was still not the best designed vessel for overnight patrols and beach contacts, but our staff made it work. In addition, demands of homeland security and an extreme fire season made it more difficult to schedule law enforcement personnel on all of our trips. Because of this and the drawdown of our own staff for fires, fewer overnight patrols were made this season. This program remains very popular with the public and is still our primary venue for educating and informing the public on a variety of park issues.

Interpretation provided direct logistical support to the Protection division in the way of assistance with SAR's, body recovery, and investigations. Boats and personnel were provided for SAR's and body recoveries. Valerie Nelson served as a family liaison on several fatalities. We also provided maps and other support for several law enforcement operations. DI continued to serve as a Peer Counselor this year, providing Critical Incident Stress Debriefings for both park personnel and family members involved with fatalities.

With the loss of the Subdistrict Interpreter position, our Education/Outreach efforts have been severely scaled back. The length of season (1040 hrs) is not sufficient to provide peak visitation coverage and to conduct a fully developed education program. The park's

Education Specialist did make a few trips uplake and the seasonals all managed to do one school program in September before their hours ran out.

HALLS CROSSING SUBDISTRICT

One seasonal staffed this subdistrict.

Halls Crossing-based interpreter Paul Nelson provided roving coverage during the summer months at the marina on a consistent basis. A more concerted effort was made to regularly staff the Halls Crossing station and provide consistent roving interpretation in the marina area. This resulted in a significant (200%) increase in the number of contacts in the area. The seasonal interpreter was fully integrated with the Bullfrog operation, providing coverage for water quality, Defiance House, roving, and visitor center operations.

HITE SUBDISTRICT

This subdistrict was staffed by one seasonal.

Water quality patrols were hindered at Hite this year due to lack of a reliable vessel. For most of the season, we had to rely on the regular water quality patrols to provide lake coverage in the area around Hite.

Significantly lower lake levels had the most impact on Hite this year. Several popular beaches used for camping were deserted because visitors could no longer beach their boats near their camps. Travel uplake and upriver from Hite was nonexistent after spring.

INFORMATION REQUESTS

During FY02, visitor center staffs park-wide responded to 7,285 requests for information (6,013 phone, 1,272 email or letter).

FORMAL EDUCATION PROGRAMS



Joan Mayer continues in a 24/36 seasonal position as Education Coordinator.

Glen Canyon's latest educational tool, Educator One, is making durable impressions and noteworthy progress for the advancement of boating safety. This tabletop model of a full-sized houseboat captivates the

imagination and raises the sensibility of even the most capable boater. The model was premiered at the 2001-02 national boat shows in Arizona, Colorado, Utah and Nevada, unveiled at many special events in Arizona, featured at the National Park Service Safety Awards banquet in Phoenix and spotlighted at the interagency carbon monoxide summit at Glen Canyon. Educator One's realistic scale model generator expels simulated CO from its stern and starboard side. This visualization clearly shows the "death zone" that boaters need to be aware of while operating the generator and engines. In addition, Educator One illustrates green boating techniques, the importance of personal floatation devices, and other safety and environmentally friendly tips boaters might overlook while vacationing at Lake Powell.

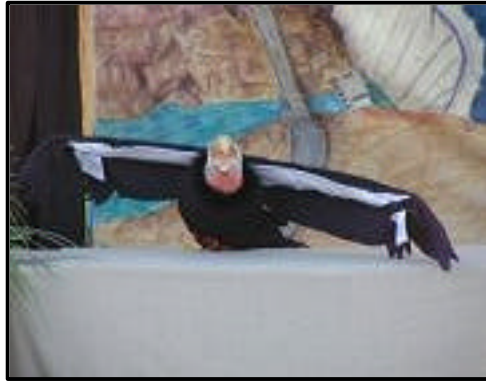
The Field Science Partnership between the Page Unified School District and the National Park Service is now fully integrated into the high school curriculum as an Advanced Biology class. Students continue rigorous research on the endangered Razorback Sucker and the Tiger Salamander at the City's golf course ponds and do effective water quality testing on Lake Powell. Staff also continues to provide regular educational outreach programs upon request in all local schools on many subjects and grade levels.

Community Connections

The staff participated for the first time in the 'Festival of Science', a long standing, well attended annual event held in Flagstaff, AZ. Joan Mayer designed the exhibit with new banners, interactive activities, unique stickers, an improved Eco quiz, boating and knot-tying quizzes, and two new bookmarks about water facts and green boating.

Boat shows: Industrial strength education directed at future visitors to Glen Canyon proves successful. Two outstanding educational tools - 'Savannah the Stink Bug' and 'Educator One' - were unveiled to teach boating and water safety for kids and adults. Kids adorned with 'Savannah the Stink Bug' temporary tattoos, were cheerfully reminded to wear their life jackets. Educator One (see description above) advocates boating safety, green boating, and the NPS mission of preservation and protection of resources.

Grant writing: Two grant proposals were submitted for the renovation and regional use of the local school district greenhouse: Parks As Classroom (\$25K) and National Fish and Wildlife Foundation (\$20K). About 30 partners have been identified to help with this innovative and highly anticipated project. Notification of funding is still pending. The Education Specialist also applied for a mini-grant through the National Park Foundation for a newly produced Discovery Channel dinosaur film. The film should be available this spring to enhance our educational outreach partnership with the Grand Staircase-Escalante NM dinosaur discoveries.



Conrad the Condor

Other Outreach Projects: American Frontiers Trek, a National Geographic Society group, provided an educational program for the Bullfrog School. Students listened to tales of the trekkers' exciting adventures on public lands and learned about the importance of geography and place. "Conrad's Great Adventure" premiered as the first full-scale puppet show to be produced at Glen Canyon. Joan's newest project is a collaborative effort with a New Hampshire middle school to produce a kid's version of the "Geologic Story of Glen Canyon and Surrounds" using video animation and claymation. Students begin production in early 2003 with final product expected by June. It will be available for both distance learning and regular interpretive programs.

VOLUNTEER-IN-PARKS PROGRAM

Within Glen Canyon National Recreation Area and Rainbow Bridge National Monument, 206 volunteers donated a total of 13789.5 hours. This is an increase of over 3,000 hours from 2001. Notable donations include over 5,000 hours donated by Trash Tracker volunteers and 800+ hours donated by our Business Plan Volunteers. Regional VIP funds in the amounts of \$4,500 and \$1,000 for Glen Canyon National Recreation Area and Rainbow Bridge National Monument, respectively, were used to support the volunteer program. During the busy season, lack of trailer spaces with hookups and other housing options for volunteers impeded the number of volunteers available to Glen Canyon and Rainbow Bridge.



Graffiti Removal

Glen Canyon NRA volunteers and employees undertook an initiative to remove graffiti from heavily impacted areas around Lake Powell. Volunteers coordinated by our Graffiti Ranger provided 1400+ hours of their own time last summer. They used wire brushes, whisk brooms, pressure sprayers and elbow grease to make 100's of square feet of sandstone walls and canyons pristine again. Traditionally, the removal of graffiti from a given area will make it less likely that graffiti will re-appear there. The work that our

volunteers performed will assure a more enjoyable and meaningful visitor experience for years to come. We anticipate an upsurge in public support for graffiti removal in the coming years.

The Park VIP Coordinator partnered with all other divisions in making sure that all VIPs were properly signed up and all hours were documented. One reportable accident occurred that required OWCP reporting. The Trash Tracker Program had another successful year and contributed substantially to the reduction of waste on the shores of Lake Powell. Interpretation Secretary Lisa Dittman facilitated distribution of applications, trip assignments and notifications, and maintained excellent communication with our partner, ARAMARK. Rick Jones coordinated with ARAMARK to assure program success, constantly monitored and assured public and employee safety, assured good communication and coordination with Trash Tracker Captains and crew, promoted the program when appropriate and assured constant coordination with other divisions and partners.

VIP recruitment continues and will be facilitated by new recruitment brochures currently being produced. Overall, 2002 was a very successful year for the VIP program.

V RESOURCE AND VISITOR PROTECTION

PERSONNEL

Cindy Ott-Jones remained as Division Chief with Mike Mayer serving as Deputy Chief. Thirteen personnel changes were made in the Protection Ranger and Dispatch branches of the division.

Uplake District

David Bauer accepted the Escalante Subdistrict Ranger position in March. David Walton, Bullfrog Subdistrict Ranger, accepted a new job at Sequoia-Kings Canyon NP and Laurie Axelsen was hired in July to fill the vacancy. Jason Bauwens and Kathy Lloyd filled the vacant subject-to-furlough (STF) positions at Bullfrog. Elaine Smith accepted the vacant permanent full-time (PFT) position at Halls Crossing in August. Jason Gaskin filled the vacant Hite STF position.

Downlake District

New ranger hires at Wahweap included Erik Larson, Jared St. Clair, Julie Yucker, Matt Fisher, and Jim Nichols. Jim Gould transferred to Sequoia-Kings Canyon in September.

Brian Bloom and Kevin MacLean accepted the two, vacant STF positions at Dangling Rope in the spring. By October, Brian Bloom had transferred to the Grand Canyon for a year-round job.

Two Subdistrict Rangers transferred out during the same pay period in August. Alan Picard at Dangling Rope transferred to a Department of Treasury instructor job at the Federal Law Enforcement Training Center. Colin Smith at Lees Ferry transferred to Point Reyes National Seashore.

FEE DEMONSTRATION PROGRAM

The entrance stations were open through mid-November to capture shoulder season revenues. Their opening was delayed until mid-March due to DOI Internet access being shut off, resulting in a delay to recruit. The reception desk at Headquarters processed receipts from the mail-in program, over-the-counter sales of passes, and entry receipts collecting \$10,481.00 in revenue, nearly double from the previous year. In addition, the reception desk served as the only point of sale for commercial business permits, significantly reducing waiting lines at the entrance stations. Two hundred and twenty-three commercial vehicle permits and 260 commercial vessel permits were sold to local Incidental Business Partners.

The Fee Program employed 38 staff comprised of permanent, STF, seasonal, and student employees. Five VIP campground hosts were funded at Lees Ferry.

The Fee Program instituted changes in efforts to improve customer service, accountability, reduce costs, and collection of entrance statistics through improved cash register programming. The annual Glen Canyon entrance pass evolved from a windshield sticker to a hand carried pass. This change resulted in more than several businesses being identified as conducting illegal business within the recreation area when they complained of having to buy numerous passes for their employees. The businesses were referred to the Concessions Division and provided information on Incidental Business Permits (IBP). A commercial permit program was introduced as a means to clearly identify IBP's at the entrance stations and within the recreation area. Under the Fee Demonstration Program, the permits for business vehicles and vessels are offered at \$5 each, a significant discount over the \$20 cost of the annual recreation pass. The result was improved business relations between local businesses and the National Park Service. Statistics collected at the entrance stations include:

- ? 92,209 vessels, based on annual vessel permit sales and returning vessel counts
- ? 29,953 camping nights
- ? National Parks Pass upgrades from other park's entrance receipts netted in a \$43,934 income loss to Glen Canyon
- ? 43,471 National Park Passes were presented for entry bringing in 121,753 visitors
- ? 403 fee waivers covering 2,986 visitors
- ? 3,645 Golden Access Passports presented bringing in 8,407 visitors

Annual fees collected totaled \$2,410,553. Cost of collection was \$804,300. Fee demonstration funds were used to maintain the water quality project, promote graffiti removal, upgrade exhibits, provide for paving and improvements to the Lone Rock Campground area, and extended the launch ramp at Antelope Point by another 160 feet.



Entrance station at Wahweap

DISPATCH

Dispatch saw another partial turnover in staff in 2002. Lori Goodman resigned in July. Rob Williams resigned in September to become a Navajo Nation Police Officer.

The Emergency Medical Dispatching System entered its fourth year of operation with dispatchers attending EMS tape and chart reviews for continuing education. The Glen Canyon Dispatch Center continued to provide emergency dispatch services for the NRA, receiving, dispatching and recording over 5,400 case incidents in 2002. This number (compared to over 6,000 for the previous year) reflects another drop in park visitation.

Dispatch continued the task of timekeeping, mobilization, and demobilization of law enforcement security units through September, assisting over 150 rangers involved in the security effort at Glen Canyon Dam. Dispatch also provided 24-hour back-up to the City of Page. We continue to work closely with the Bureau of Reclamation, Bureau of Land Management, Department of Public Safety and Coconino County Sheriff's Department to monitor the safety of the dam.

TORT CLAIMS

During FY02, six tort claims were processed, up from five in 2001. Three claims were paid, totaling \$1,020, compared to \$3,020 in 2001. Three claims were denied.

WILDLAND FIRE PLANNING AND RESPONSE

David Bauer, new Escalante Subdistrict Ranger, was assigned as the collateral duty Fire Management Officer.

Glen Canyon continues as an active member of the Color Country Interagency Wildland Fire Management Area. The park excelled in providing more red carded employees to assist in the national fire fighting effort. The division organized two basic fire fighting courses, training 40 people including employees from five nearby parks. Glen Canyon supported 64 wildland fire fighters and filled 19 fire resource orders.

For nearly a month this past summer, Glen Canyon supported the fire ban placed by the Color Country management area. No campfires or charcoal fires were allowed, making self-contained gas stoves the only legal method of cooking on the park beaches and campgrounds.

STRUCTURAL FIRE

Glen Canyon sponsored two major interagency training classes during the year including a 40-hour structural engine class and an 80-hour basic firefighter class. These classes were coordinated with the national structural fire program for the NPS and were the first of many that will use Glen Canyon as a national fire training area.

Marine fires continue to be challenging but the numbers dropped dramatically to only five incidents this year, compared to 12 in 2001. Several boat fires resulted in the total loss of the vessels with one resulting in a wildland fire in Iceberg Canyon.

A surplus, 1984 model fire truck was acquired from Shenandoah National Park to supplement Bullfrog Subdistrict's fire station until a new engine was ordered. The new fire truck arrived at Bullfrog in September, ending a 6-year process of acquiring funds for this essential piece of equipment.



New fire truck at Bullfrog

STATISTICAL INFORMATION

Visitation to Glen Canyon NRA in Calendar Year (CY) 2002 totaled 2,128,379 as compared to 2,363,807 in CY2001.

Visitation to Rainbow Bridge NM in CY 2002 totaled 167,736 as compared to 189,750 in CY 2001.

CRIMINAL ACTIVITY (CALENDAR YEAR)

	<u>2002</u>	<u>2001</u>	<u>2000</u>	<u>1999</u>	<u>1998</u>	<u>1997</u>
Part I Offenses	92	103	38	156	145	208

Part II Offenses	1168	1919	4229	1453	1686	1777
Arrests	121	195	187	195	159	311
Total Incidents	5403	6078	7169	6084	6366	7745

Total incidents, above, include minor vehicle and boat violations, and non-traffic incidents.

A commissioned staff that numbered 31 Rangers, one Criminal Investigator, and nine seasonals handled these incidents. Ten of these rangers were STF, working six months. Six dispatch personnel handled operations.

Proactive law enforcement activities, particularly on Lone Rock Beach and Bullfrog South and North, along with drug task force activities uplake resulted in the majority of the drug related contacts.

OFFENSES (CALENDAR YEAR)

	<u>2002</u>	<u>2001</u>	<u>2000</u>	<u>1999</u>	<u>1998</u>	<u>1997</u>
Drugs	75	96	132	103	159	101
Alcohol	407	428	436	276	310	264
Weapons	49	38	68	77	81	98

MAGISTRATE SYSTEM

Most court proceedings before U.S. Magistrate Judge Stephen L. Verkamp were held either at the Wahweap Ranger Station or the Federal Court in Flagstaff. The Magistrate traveled to Page nine times in calendar year (CY) 2002 to preside over the park's court cases. Rangers and investigators also attended court in Kanab, UT, and U.S. District Court in Salt Lake City, UT, and Phoenix, AZ.

The park still retains warrants for suspects who live within 80 miles of the park; all other warrants are sent to the U.S. Marshall's Service in Flagstaff, Arizona.

An innovative shared use of a Special Agent position at the Grand Canyon began in June. This agent is stationed in Flagstaff, Arizona and handles the complicated court function for Glen Canyon. Shared funding for this position will begin in FY03.

VISITOR SAFETY AND MAJOR INCIDENTS

Division personnel continued to provide management, logistical planning, and operational lead to the Homeland Security effort at the Glen Canyon Dam facility under a reimbursable agreement with BOR. NPS provided 24-hour security through the fiscal year with over 150 rangers rotating through security details during this time.

This was the largest managed incident in the history of Glen Canyon NRA. Private security guards replaced commissioned NPS rangers at the end of September.

Five Glen Canyon rangers were detailed for one month to the 2001 Winter Olympics in Salt Lake City. Ranger Alan Picard served as a team leader. Glen Canyon rangers worked three of five venues at the Games.

Rangers responded and rescued numerous visitors this year. Notable life saving rescues occurred on Navajo Mountain, the Cookie Jar, and in Coyote Gulch. Five visitors were removed from the lake with back injuries after becoming airborne as a result of their vessels crossing large boat wakes.



Boat fire in a side canyon

Wahweap rangers provided support to the local Page community under a cooperative agreement for fire and EMS. The Glen Canyon structural fire brigade responded in the park fire truck to three house fires and over 10 ambulance runs in support of Page personnel. Uplake rangers responded to assist the community of Ticaboo, UT, and the Utah Highway Patrol on several fires, motor vehicle accidents and other law enforcement activities.

Rangers assisted Coconino County (AZ), Kane County (UT), Garfield County (UT), and San Juan County (UT) in numerous incidents throughout the year. These included fatalities in motor vehicle accidents and the crash of an ultralight airplane. Rangers responded and arrested two separate attempted homicide suspects at Wahweap. One incident involved a fight between two males resulting in the stabbing to the chest of the

victim with a pair of scissors. The second incident involved a domestic assault resulting in the attempted murder of the female victim.

Carbon Monoxide (CO) continued to be a focus and significant issue for the Protection division. Two fatalities and multiple poisonings were handled this year. Staff made a CO poisoning presentation to the Colorado River Law Enforcement Association in Las Vegas, NV. Uplake rangers supported the national investigation on CO poisonings by assisting National Institute for Occupational Safety and Health (NIOSH) in the investigation of CO concentrations on two vessels. Staff also participated in local radio spots discussing CO poisoning.

Two accidental CO poisonings resulted in fatalities and extensive investigations. One occurred in Halls Creek Bay and resulted in the death of nine-year-old female who was washing her hair in the warm water exhaust from a running generator. The second involved a 42-year-old male attempting to untangle a rope from the propeller of a houseboat. This death involved a multi-day body recovery operation.

Protection rangers rescued fifteen visitors suffering from CO poisoning in early October. Faulty exhaust systems in the two houseboats involved were responsible for these near fatal events.

We experienced high visitation during the Memorial Day weekend and the 4th of July week that required additional personnel resources from outside the park. A collaborative effort by the Kane County Drug Task Force and Glen Canyon NRA uplake over the Memorial Day weekend resulted in eight arrests and the seizing of marijuana and cocaine.

Uplake rangers responded early in the year to a very difficult fatality of a four-year-old female who had been run over by her father driving a large pickup truck. CPR was performed for over 45 minutes to no avail.

Flash flooding in Escalante Canyon and in the developed areas of Bullfrog and Halls Crossing resulted in stranded visitors and much damage to government property. These flooding incidents were co-managed by the Protection and Facilities divisions to provide visitor safety and to minimize damage.

EMERGENCY MEDICAL SERVICES

There were 410 documented medical incidents in CY02, up from 396 reported in CY01. We had 68 ALS cases, 266 BLS cases, and 76 minor cases or cases in which patients received assistance but refused or did not require transport to a medical facility.

Dr. Robert Baron continues to serve as Medical Director of the park's EMS program. He visits the park 11 times per year to provide continuing education for the park's EMS staff.

SEARCH AND RESCUE OPERATIONS (CALENDAR YEAR)

<u>2002</u>	<u>2001</u>	<u>2000</u>	<u>1999</u>	<u>1998</u>
118	165	126	150	225

VISITOR FATALITIES (CALENDAR YEAR)

	<u>2002</u>	<u>2001</u>	<u>2000</u>	<u>1999</u>	<u>1998</u>	<u>1997</u>
Accidental Death	7	7	5	6	10	23
Natural Causes	1	7	1	3	5	2
Suicide	0	0	1	1	2	1
Homicide	0	0	1	1	0	0
Undetermined	0	0	0	1	0	0
Total Fatalities	8	14	8	12	17	26

VI FACILITIES MANAGEMENT

FUNDING AND SPECIAL PROJECTS

ONPS funding GLCA & RABR allocation	\$3,168,500
Electrical Income	400,517
Water/Sewer Income	547,298
Housing Permanent (includes carryover)	312,976
Housing Seasonal (includes carryover)	<u>50,448</u>
	\$4,479,739

Comparison with previous year (FY01) \$4,171,591

Fee Demo 80%

PWC Survey and Planning	\$ 25,198
ONGOING	
Lone Rock Paving	237,000
COMPLETED	
Dangling Rope Batteries	311,982
COMPLETED	
Antelope Point Ramp Extension	162,881
COMPLETED	
Replace ROV Sonar System	<u>10,000</u>
COMPLETED	
	\$ 747,061

Fee Demo 20%

Spencer Trail Rehab	\$ 41,194
COMPLETED	
Accessible Beach Access	<u>1,173</u>
COMPLETED	
	\$ 42,367

Concessions Fee 80%

Cleanup Human Waste Colorado River	\$ 17,185
COMPLETED	
Upgrade Lees Ferry Water System	29,915
COMPLETED	
Repair Lees Ferry Road Bridge	1,050
COMPLETED	
Colorado River Management Plan	<u>14,000</u>
ONGOING	
	\$ 62,150

SLIF

Antelope Point Parking Lot	\$ 758,903
COMPLETED	
	\$ 758,903

Federal Highways

Road Construction	\$ 200,000
ONGOING	
	\$ 200,000

City of Page

Sewage System Connection Fee	\$1,100,000
ONGOING	
	\$1,100,000

Equipment Replacement

Replaced 19, Boat	\$ 82,500
COMPLETED	
Replaced Backhoe Loader	55,037
COMPLETED	
	\$ 137,537

Repair/Rehab/Cycle/NPS, Suff Funds

Replace Sewage Flow Meters	\$ 64,100
ONGOING	
Potable Water Source Dangling Rope	236,500
ONGOING	
Rehab Fire Hydrants	495,000
ONGOING	
Replace Breathing Apparatus	36,500
COMPLETED	
Replace Failing Water System	20,200
COMPLETED	
Emergency Utility services	60,000
COMPLETED	
Spill Prevention	10,000
COMPLETED	
Integrated Solid Waste Plan	20,000
COMPLETED	

Pesticide Storage Facility	5,000
COMPLETED	
Chains Area Assessment	29,000
ONGOING	
Halls Crossing Corrective Action	50,000
ONGOING	
Wahweap Wells Abandonment	<u>21,300</u>
ONGOING	
	\$1,092,900

WORK REQUESTS

Total Work Requests FY02	197
Total Work Requests Completed FY02	136
% Of Work Request Completed	69%

CONCESSION SPECIAL ACCOUNTS PROJECTS

The Capital Improvement Account (CIA) collected \$3,221,265 and expended \$1,354,011.

The Campground Improvement Fund (CIF) collected approximately \$26,777 and expended \$7,785.

The Construction Set-aside (CSA) fund collected \$2,735,001 and expended \$4,202,449.

The Government Improvement fund (GIA) fund collected \$80,000 and expended \$56,635.

PROJECTS COMPLETED IN FY02

? CIA 3	BF expand infrastructure
? CIA 21	HC electrical upgrade
? CIA 24	BF fire apparatus
? CSA 47	WW campground rehab phase III
? CSA 48	BF campground rehab phase I
? CSA 69	BF kiosk
? GIA 03	repair floating restroom/pumpouts

PROJECTS UNDERWAY IN FY02

? CIA	WW residential forcemain and lift station
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? CIA 12	BF marina restroom
? CIA 23	lakewide concessioner housing master plan
? CIA 25	WW electrical system upgrade
? CIA 27	DR front access ramp and walkways
? CIF 15	BF A/B/C loop design
? CSA 43	WW fire station
? CSA 47III	WW campground store
? CSA 80	WW waste water system
? CSA 87	BF/HC lift station replacement
? CSA 88	HI DCP update
? CSA 90	WW public launch ramp extension
? CSA 91	SL public launch ramp extension
? CSA 92	BF main public launch ramp extension
? CSA 93	BF/HC ferry ramps extension
? CSA 94	WW deepen castle rock cut
? CIF 14	HC replace campground grills
? CIF 16	HC campground improvements

MAINTENANCE ACCOMPLISHMENTS

Implementation of Facility Management Software System (FMSS) and completion of the Facility Condition Assessment Survey and Cost Estimating of Deficiencies: It took two supervisors most of the summer to input all park assets and to complete the condition assessment and cost estimating of deficiencies. Additional assistance was provided by several staff members.

As a result, Glen Canyon NRA has been recognized by WASO for its outstanding efforts in the timely completion of such work. Glen Canyon's example has been offered up to other parks to aid them in implementing their own cost estimating procedures.

Training

Training for maintenance staff: FMSS, dive training, regional dive refresher at Amistad NRA, pest control, hazmat, water/wastewater treatment, backflow prevention and certification, sewer, fire, OMC and Mercury marine engine technical schools, Swift Water Rescue Class, DOIMOCC, electrical training, sexual harassment prevention, safety, COTR, and COR Refresher. Staff also attended regularly scheduled safety meetings and other required training sessions.

Staff provided instruction and assistance at DOIMOCC and Regional Dive Seminar.

Uplake

The following list of accomplishments are above normal maintenance, checks, and services as well as minor repairs (i.e., work orders) to facilities and systems for FY02.

Major Housing Improvements

- ? New floor and linoleum in kitchen of HC002 (damage caused by water leak)
- ? Drywall garages in BF704B and BF703B
- ? New garage door BF704B
- ? New floor coverings throughout BFMH15 and new swamp cooler
- ? New bathroom vanities, kitchen countertops, cupboards and linoleum BF703A
- ? Re-carpet entrances BF705, BF706, BF707

Major Building, Facility and Road Improvements

- ? Identified, procured, and installed materials to sustain critical facilities during low water periods
- ? Enclosed shade structure to make storage building at BF Maintenance
- ? Installed new garage doors and upstairs floor coverings at Hite Fire Hall
- ? Installed new windows and signal lights at BF fee booths
- ? New interpretive displays at Hite Overlook
- ? Repaired fences and installed interpretive signs at Mistake Alcove and Widows Ledge Ruins
- ? Rehabbed government dock road
- ? Striped and painted traffic control devices in all BF Parking lots
- ? Completed fee machine structure at HC

Major Water System Upgrades / Accomplishments

- ? Rehabbed controls on Bullfrog well #1

Major Wastewater System Upgrades

- ? Installed larger vacuum systems on HC and BF boat pumpouts (much positive feedback from visitors and less callouts for down pumps)
- ? New commercial disposal on BF fish cleaning station
- ? New controls on HC lift station #1
- ? Moved HC Boat pumpout to entrance of marina to allow change of marina arrangement

Major Electrical System Upgrades

- ? Moved test generator at HC from test cabinet to inside generator building
- ? Larger electrical feed lines to all three pumpouts due to low water
- ? Removed foreign object from HC generator fuel storage tank that had caused several power outages

Contract/Project Support

- ? Performed COR and/or inspector duties as well as general maintenance support to include utility line locates on the following projects:
 - ✍ HC water system upgrade
 - ✍ Hite water treatment plant upgrade
- ? Project Design Support
 - ✍ Parkwide fire hydrant replacement

Support to other parks, divisions, and local support requirements

- ? Moved BF courtesy docks closer together to allow UDOT ferry to operate off BF launch ramp
- ? Personnel to the Glen Canyon NRA Fire, EMS, and SAR functions

Significant Personnel Changes

- ? Billy Kelly from Maintenance Mechanic (Carpenter) WG-09 to Engineering Equipment Operator WG-09
- ? Ken Coss from Carpenter Helper WG-07 (STF) to Maintenance Mechanic (Carpenter) WG-09
- ? Jackie Messer from Maintenance Mechanic Supervisor WS-10 to Facility Manager GS-11 (Fort Scott NHS)
- ? Eric Smith from Maintenance Mechanic Supervisor WS-08 to Maintenance Mechanic Supervisor WS-10

Equipment Upgrades

- ? Equipment acquisition of 10 yard dump truck

Emergency Repairs

- ? Repairs to all roads and parking lots in BF area after September 7th floods (ongoing project)
- ? Repair to three water mains after floods
- ? Repair wastewater and water lines at HC after floods

Downlake

Roads & Trails

Barging operations included moving 24 loads of propane to Dangling Rope. Twelve trips were made to Rainbow Bridge NM to haul equipment for new docks and for trail rebuilding

Storm Damage Repair

- ? Lake Shore Drive - remove excess material and fill in behind guardrail.
- ? Chains Road - remove excess material and fill in erosion areas
- ? Sunrise Hill Road - replace 600 ton of base course material, blade and compact
- ? Rainbow Bridge Trail - repair existing trail and add ½ mile of new trail
- ? Lees Ferry - erosion control at No Name Wash, install gabion baskets and culverts

- ? Bullfrog - flood repair, clean up all roads and parking areas, fill erosion areas
- ? Spencer Trail - repair ½ mile of washed out trail



Damage caused by flash flood events

Work Caused By Low Water

- ? Moved Rainbow Bridge dock system 8 times
- ? Moved Dangling Rope dock system 3 times
- ? Extend concrete ramp at Antelope Point 200 feet
- ? Cleaned and groomed Wahweap Swim Beach 3 times
- ? Extended tour boat dock road 3 times
- ? Reconstructed low water parking lot and road at Wahweap
- ? Moved Wahweap government docks and boat slips 8 times
- ? Cleaned up Lone Rock Beach, installed berms and moved restrooms

Roads and Parking

- ? Paved 600 feet of roadway and visitor parking area at Lone Rock
- ? Paved visitor parking area and install Storm Septers at Antelope Point
- ? Assisted contractor with blasting of utility line for new water system at Hite
- ? Installed new Fiber Optic cable for Maintenance shop and Warehouse at Wahweap
- ? Installed utilities for well # 4 at Wahweap
- ? Crack-sealed lodge parking area at Wahweap
- ? 4 trips out of the park for excess property
- ? Fabricated 45-foot haul out boat trailer
- ? Personal Watercraft closure
- ? Business Plan with Role and Function Statement
- ? Implemented Facility Management System Software (FMSS), completed the Condition Assessment Inspection and Cost Estimating of Deficiencies for all downlake facilities
- ? Fabricated Sewage Pumper Truck from excess vehicle

Aids to Navigation / Dive Program

- ? 243 repairs of buoys in navigational system
- ? 3 major repairs of Dangling Rope Dock
- ? 8 repairs to Rainbow Bridge dock system accounting for over 1 month of workdays
- ? 4 major moves of the main channel, 2 near Dominquez Butte, 1 at Gregory Butte, and 1 at Rock Creek Bay
- ? Open and maintain Castle Rock Cut
- ? PWC closure at Rainbow Bridge National Monument
- ? Complete inventory (PATON) of all navigational aids on Lake Powell, which includes those aids owned and maintained by the Concessioner. Survey was Coast Guard directed
- ? Conduct two week-long Motor Boat Operator courses (DOIMOCC)
- ? Resolved Aramark lighting issues, working with the Concessions division, Visitor Protection division, and the United States Coast Guard

Underwater Recovery Unit

- ? Morgan County SAR, 6 days
- ? Lake Pleasant, Maricopa County SAR, 3 days
- ? Recovery Operations Crappie Cove, Uplake, 2 days
- ? Recovery Operations Chains, Downlake, 1 day
- ? Recovery Operations Knowles Canyon, 5 days
- ? Three day operational search training presented to the National Academy of Federal Bureau of Investigation Academy
- ? Monthly dive training for park divers
- ? Three day dive training for divers and ROV operators
- ? Prepare specifications and order Digital Sonar for ROV
- ? 3 day ROV technical refresher / major maintenance of ROV
- ? Installation and training with new ROV sonar
- ? Attend Phoenix Boat Show, 5 onstage water safety presentations over 6 days
- ? Underwater survey work for Antelope Point Marina
- ? Repair and inspection of dock structures of Dangling Rope Marina
- ? Conduct basic search training for Montezuma County Sheriff's Office

Boat Shop

- ? Repowered Boats 210, 221, 251, 252, 253, 255, 273, 227
- ? Serviced 42 boats
- ? Bottom repairs to 4 boats

Auto Repair Shop

- ? Serviced 66 pieces of rolling stock
- ? Replaced J D Loader with new Cat Loader
- ? Rehabbed excess property 10 wheel dump truck
- ? Major repair to Furguson roller

Buildings and Utilities

The accomplishments noted below are above normal maintenance, checks, and services as well as minor repairs (i.e., work orders) to facilities and systems for the FY02.

Major Housing Improvements

- ? Wahweap Housing Rehabs: 114B, 119A, 119B, 119C, and 119D
- ? Page Housing Rehabs: PG-2, PG-3, PG-6, and PG-11 (plus grounds landscaping)
- ? LF Housing Rehabs: LF203

Major Building and Facility Improvements

- ? Identified, procured, and installed materials to sustain critical facilities during low water periods
- ? Rehabbed three walkway docks for Rainbow Bridge NM
- ? Re-roofed Lees Ferry maintenance storage shed

Major Water System Upgrades / Accomplishments

- ? Upgrade of Wahweap Water Well # 4
- ? Upgrade of the Lees Ferry orchard water line
- ? Park-wide fire hydrant replacements (101 fire hydrants). This project is currently under construction
- ? Installation of a Variable Speed Drive (VSD) and automation control of well #3 pressure building
- ? Installation of a Variable Speed Drive (VSD) at the Dangling Rope main dock lift station
- ? Upgraded and incorporated a new park-wide cross-connection control policy
- ? Replace a 1,000 LF segment of the Lees Ferry orchard water line
- ? Continued Lees Ferry Water Treatment Plant upgrades

Major Wastewater System Upgrades

- ? Wahweap gas station lift station upgrade

Major Electrical System Upgrades

- ? Upgrade of the Wahweap government dock electrical system
- ? Installation of new telephone conduit for Wahweap telecommunications
- ? Upgrade of electrical service to well #4 pump building

Contract/Project Support

- ? Performed COR and/or inspector duties as well as general maintenance support to include utility line locates on the following projects:
 - ✍ Dangling Rope sewer lagoon upgrade
 - ✍ Dangling Rope Battery Building to include transfer of electrical components (i.e., inverter) and the installation of new photovoltaic batteries

- ✍ Dangling Rope Special Projects (utility lines (water and sewer) down the hill to the marina docks)
 - ✍ Well #4 upgrade
 - ✍ Wahweap gas station lift station upgrade
- ? Design reviews. Worked closely with professional staff (N.P.S. and contracted firms) on project development (i.e., design reviews) and utility locates for the following projects:
- ✍ Wahweap Fire Station
 - ✍ Lees Ferry Main Ramp Restroom Rehabilitation
 - ✍ Wahweap Campgrounds
 - ✍ Wahweap Picnic Area Rehab
 - ✍ Force Sewage Main to Page
 - ✍ Project Design Support
 - ✍ Park-wide Fire Hydrant Replacement
 - ✍ Dangling Rope Well # 2 Upgrade
 - ✍ Lees Ferry Main Ramp Parking Lot
 - ✍ Lees Ferry Campground Leach Fields

Support to other parks, Park Divisions, and Local Support Requirements

- ? Support to Navajo National Monument for utility upgrades and for fire suppression system upgrades
- ? Support to Flagstaff Group for utility system maintenance
- ? Water and pumping support to the Navajo Bridge
- ? Significant personnel to the Glen Canyon National Recreation Area Fire, EMS, and SAR functions.

Updates to Glen Canyon National Recreation Area Standard Operating Procedures

- ? Updated and instituted the Glen Canyon NRA Emergency Response Plan
- ? Updated the Glen Canyon NRA Confined Space Plan. The Confined Space Plan is in for review and approval at this time
- ? Developed and instituted a Glen Canyon NRA Cross-Connection Control Policy

Significant Personnel Changes

- ? Becky Sessions from WG-05 (Maintenance Worker) to WG-08 (Maintenance Worker - Grounds Maintenance)
- ? Fred Colburn from WG-05 (Seasonal Maintenance Worker- Janitorial) to WG-05 (Full-Time Maintenance Worker- Janitorial)

Equipment Upgrades

- ? Equipment Acquisition: 7-1/2 ton crane, 4-wheel drive sewage pump truck
- ? Equipment replacement Program: Caterpillar Loader and John Deere Backhoe
- ? Rebuilt two sewage pump trucks

Other Significant Accomplishments

- ? Implementation of Facility Management Software System (FMSS) as well as completion of the Condition Assessment Inspection and Cost Estimating of Deficiencies for all Downlake facilities.
- ? Installation of new photovoltaic batteries at Dangling Rope.



Dangling Rope Photovoltaic Field

- ? Worked closely with ADEQ and UDEQ on water and wastewater compliance issues to include emergency water response issues, backflow compliance, and surface water influence at the Wahweap water wells.

ENVIRONMENTAL MANAGEMENT AND PARK PLANNING

Park Planning

- ? Completed inventory of day use and campsites along the 15-mile stretch of Colorado River Corridor from the Glen Canyon Dam to Lees Ferry.
- ? Conducted numerous visitor surveys and boat counts throughout the year for the Colorado River Recreation Management Report. Draft report due out in April 2003.
- ? Continue to manage the interdisciplinary team to develop the Hite Development Concept Plan and Environmental Assessment. Draft DCP/EA due out in March 2003.
- ? Developed scope of services and cost estimates for subcontracts to collect field data for air, water and noise analyses for the PWC EIS. Entered PMIS requests to develop monitoring programs for these resources.
- ? Participated in 6 radio announcements to ensure adequate public scoping and outreach for GLCA's five major NEPA planning projects.
- ? Conducted six public comment workshops in Page, Phoenix, Grand Junction and Salt Lake City in during 2002.
- ? Provided the park web master with readable files of the public scoping brochures, public comment summaries, news releases, and public meetings information. Continually monitor the web site to insure information is correct and provide current updates.

- ? Reviewed over 8000 public comments received by the park, incoming mail and electronic. Created public response letters confirming receipt of public comment and the park web site. Categorize comments and enter comments into computer files for future data extraction and administrative record keeping. Maintain five mailing lists of individuals interested in various planning projects.
- ? Presented federal land use presentation to University of Utah students and participated in Page HS environmental debate class.

Environmental Management

- ? Submitted Annual Hazardous Waste reports for GLCA to states of AZ and UT for hazardous materials use and disposal activities in 2001.
- ? Conducted an 8-day Concessions Environmental Audit as an audit team member.
- ? Conducted 2 environmental inspections at Lees Ferry and Dangling Rope Marina and provided environmental consultation for corrective measures where noncompliance was found.
- ? Updated the WASO environmental compliance audit findings database and provided over 350+ corrective actions in response to these findings.
- ? Sponsored and attended 40-hour HAZWOPER training course for NPS, BOR and SRP personnel.
- ? Participated in concessioner Vessel Response Plan spill exercise and provided emergency response feedback on the process. Also acted as IC for the Wahweap battery spill incident.
- ? Requested and received funding to update SPCC plans throughout GLCA.
- ? Developed statements of work and cost estimates for Chains site investigation, Halls Crossing remediation pilot study, and Wahweap wells abandonment.
- ? Managing the HC pilot study to remediate the soil and receive state approval for closure.
- ? Managing the Chains area site investigation.
- ? Provided oversight for ARAMARK sites by reviewing reports and providing feedback to the level of cleanup accepted in accordance with EPA, State and NPS standards. These sites are HC Chevron Station Air Sparging Site and the BF Generator Tank Site.
- ? Purchased new pesticide storage cabinets for Lees Ferry, the HQ garage, Wahweap, Dangling Rope, Bullfrog, Halls Crossing, and Hite locations.
- ? Maintained tank inventory and sewage spills database.
- ? Requested and received funding to update ISWAP to improve GLCA solid waste management.
- ? Coordinated with SLC Olympics Committee to receive 200 free recycling bins for park use.
- ? Participated in the Page HS education program by helping HS students debate environmental issues.

NEPA Compliance

- ? Completed the EA and FONSI for the Wahweap Wastewater Management Project.

- ? Completed the EA and FONSI for the Antelope Point Marina and Resort Development Project.
- ? Completed a Draft EIS for the PWC Rule-Making. Issued NOI and NOA for the Draft PWC EIS.
- ? Completed forty-five NEPA project reviews and approvals using an interdisciplinary team that provides guidance and stipulations to projects.
- ? Developed standard impact threshold definitions for all resource impact topics at GLCA.
- ? Completed NEPA compliance and 404 permitting consultation for five major low-water construction projects planned in FY03.
- ? Conducted eleven U.S. Army COE and State (AZ/UT) Clean Water Act consultations and received approval on several applications, renewals and modifications to Section 10, 402 and 404 permits related to various construction projects throughout the park unit.
- ? Reviewed numerous work plans, IBPs and SUPs to provide consultation on environmental compliance and guidance on best management practices.
- ? Completed the closure of Blue Notch and White Canyon mines.
- ? Completed NEPA compliance and CERCLA cleanup requirements for the closure of Whirlwind mine.

Special Use Permits/Rights-of-Way

- ? Provided complete paperwork for conversion of a Special Use Permit to a ROW for Marble Canyon Lodge's Water Well and Distribution Lines.
- ? Provided complete project summary for the conversion of a Special Use Permit to a ROW for the Federal Aviation Administration (FAA), Remote Communications Outlet (RCO).

PROFESSIONAL SERVICES

Wahweap

- ? Produced design development documents of remaining three phases of construction for campground rehabilitation project
- ? Completed construction documents for campground store slated for construction in winter 2002-03
- ? Designed development of Picnic Area rehabilitation with construction slated for winter 2002-03
- ? Initiated Housing Master Plan for concessioner housing
- ? Conducted a condition assessment and developed a study for the Determination of Eligibility for Village Trailer Cabins

Bullfrog

- ? Finished construction of four fourplex concessioner housing units



Bullfrog Master Housing Plan



New employee housing at Bullfrog

- ? Provided design services and construction support for State of Utah Parks duplex for employee housing
- ? Designed and constructed launch ramp kiosk
- ? Constructed Campground phase 1, Loops A, B, and C



Accessible loop restrooms



Upgraded nonhook-up spurs

CSA Projects

- ? CSA – 82 HX Earthen Breakwater - 75% completed construction plans
- ? CSA – 83 BF Earthen Breakwater - 75% completed construction plans

CIA Projects

- ? CIA – 12 BF Marina Restroom (ARAMARK Marina Boat Rental bldg project) - 95% complete construction plans
- ? CIA – 22 BF Shoreline Protection - 75% completed construction plans

CIF Projects

- ? CIF – 16 HX Campground - Field Survey (98% complete); Design & Construction Plans (20% complete)

Technical Assistance & Review(s)

- ? Antelope Point Parking Lot
- ? Antelope Point DCP & Master plan
- ? Hite DCP & Master Plan
- ? WW DRO/ Fire Station - 100% complete plans
- ? ARAMARK BF Boat Rental building and flotation structure - 95% complete plans
- ? WW Waste Water Facilities
- ? 'Dark Sky' guidelines for GLCA; research with cities of Flagstaff & Sedona

Project Agreements

- | | |
|---|---------|
| ? CSA – 82 HX Earthen Breakwater – 100% draft | ON HOLD |
| ? CSA – 83 BF Earthen Breakwater – 100% draft | ON HOLD |
| ? CIA – 22 BF Shoreline Protection – 100% draft | ON HOLD |
| ? CIA – 16 HX Campground – 75% draft | |

Site Development

- ? Pave and stripe Antelope Point parking lot. Include storm water collection and treatment structures
- ? Pave and stripe Lone Rock beach parking lot. Develop access road to improve drainage and reduce erosion

Park Roads

- ? Obtain funding through Utah Department of Transportation and Federal Highway Administration for “Spot Improvement Project” to upgrade and improve safety of Lone Rock Road and State Highway 89 intersection. Develop contract documents for construction of project in the spring of 2003

Wahweap Fire Station

- ? Develop contract documents for the construction of a new fire station beginning in 2003

VII RESOURCE MANAGEMENT

This year has been a year of change for the Resource Management staff due to budget cuts and transfers. The Aquatic Program lost the PFT Biologist position that oversaw the water quality program and Mark Anderson was chosen as the new Aquatic Ecologist. Ben Bobowski, the first Range Ecologist in the park, transferred to Grant-Kohrs NHS. Effort by park staff and Utah State University to replace Ben with another SCEP appointment failed so a vacancy announcement was issued. Cultural Program Manager Chris Goetze transferred to Canyonlands NP and has been replaced by returning Archeologist Chris Kincaid. During the latter half of the year, Research Coordinator Norm Henderson was detailed to Salt Lake City into a new position as Colorado River Coordinator.

During the early part of the year, oil and gas activity around the park increased and efforts were again initiated to move the Viking Explorations, Inc., application for a permit to drill forward. Although agency coordination was underway, no action was taken during the year. The effects of drought had major impacts on both grazing and water related activities.

AQUATIC RESOURCES (WATER QUALITY)

Public Health

The Beach Monitoring Program continued in collaboration with the Utah and Arizona Departments of Environmental Quality per the 1996 Strategic Plan to Protect Water Quality at Lake Powell. Division staff participated in the Lake Powell Technical Advisory Committee which evaluates field and lab procedures and provides technical guidance for the Beach Monitoring Program. This program serves as a model for other National Park Service units including Lake Mead NRA, Chattahoochee River NRA, and Zion NP as well as other entities beginning new programs.



Water quality monitoring

Staff continued to operate the Wahweap and Bullfrog labs during the 2002 season. Class II Laboratory Certification for Environmental Testing was maintained in the Wahweap Laboratory through the Utah Department of Health, Bureau of Laboratory Improvement. The Quality Assurance Manual and Standard Operating Procedures for Glen Canyon

NRA Water Quality Labs was revised and approved prior to the 2002 sampling season. New requirements under the National Environmental Laboratory Accreditation Program were fully incorporated into the laboratory quality systems in 2002.

Through the recommendation of the Technical Advisory Committee and approval of the states of Utah and Arizona, beginning with 2002, all fecal indicator testing at Glen Canyon NRA will be accomplished with *Escherichia coli* using the Colilert™ System from IDEXX inc. The official certified laboratory method for the Wahweap Laboratory was changed to the Colilert™ method. *E. coli* has been shown in numerous studies to be a better indicator of fecal pollution and more highly correlated with human illness than non-specific fecal coliform.

Twenty-four routine sites were sampled for bacterial concentration at least every other week between Memorial Day and Labor Day of 2002, resulting in 251 samples processed. An additional 540 samples were processed from randomly selected beaches throughout the lake and suspected problem areas. Sampling of random beaches and suspected problem areas is intended to locate potential problem areas that may require regular monitoring. Random sampling also maintains the high standards of public health protection as sampling sites are dropped from the routine list due to good water quality.

Of all the water samples analyzed for *E. coli* during the 2002 season, 13 exceeded the maximum allowable limit of 126 MPN *E. coli* per 100 milliliters of water. Of the total number of samples collected (791), 13 samples represents 1.6%. There was one beach closure during the 2002 season; Oak Canyon was closed from July 11 to 15, 2002. The number of high counts detected in 2002 stands in contrast to the absence of any high counts in 2001. Causes for the increase are not positively known. It is important to stress that although more fecal contamination was detected in 2002 than 2001, the sanitary water quality of Lake Powell is still excellent and Lake Powell remains one of the cleanest reservoirs in the country.

NPS/US Geologic Survey projects

Two proposals for cooperative projects between the NPS and U.S. Geological Survey (USGS) were funded for 2001-2003. One study is examining the effects of visitor use on the side canyons of Lake Powell. Three similar canyons with varied visitor use were selected using a geographic information system model. The second of two years of field work was completed in 2002 with the taking of water quality parameter profiles, collecting depth specific water samples for analysis of nutrients and contaminants, and measuring micro-currents. Knowles Canyon was closed for the duration of the field study and reopened in September of 2002. Laboratory analysis is ongoing and a final report will be submitted in 2003.

The second USGS study examines the Colorado River sediment delta for the presence of contaminants. There is great interest in the levels of contaminants being sequestered in the deltas of Lake Powell. The Lake Powell watershed includes most of the western range of the Rocky Mountains. There is great potential for contaminants to be transported in the Colorado River. Many contaminants tend to adhere to sediment

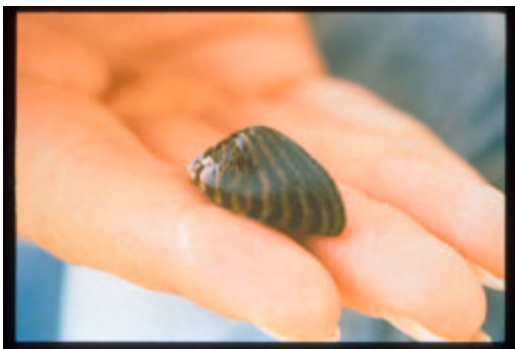
particles. The large accumulation of sediment in the inflows of Lake Powell may provide a sink for these contaminants that could present a threat to health and water quality. Cores were collected from the accumulated sediment during 2001 to test for potential contaminants. Laboratory analysis of the sediment cores is ongoing; a final report will be submitted in 2003.

Limnology

The Aquatics Program in cooperation with Grand Canyon Monitoring and Research Center (GCMRC) has continued to collect limnological data on Lake Powell. Water quality parameter profiles were done at 20 to 25 established stations along the Escalante River, San Juan River, and the main stem of the Colorado River Channel, as well as above and below the dam in 2002. Depth specific water samples are also collected for evaluation of nutrients and some contaminants. The focus of the program is to assess the impacts of dam operations on water quality resources in Lake Powell and downstream. Beginning with 2002, GCMRC has increased their annual funding to the Aquatics Program in anticipation of a larger Park Service effort in the Lake Powell limnology program.

Aquatic Nuisance Species

The State of Utah formed the Utah Aquatic Nuisance Species Action Team (UANSAT) to coordinate protection of Utah's waters from exotic species. All surface waters of Utah are at risk, but Lake Powell is considered a very likely port of entry because of high visitation. Aquatics Program staff have assisted UANSAT in the development of a Memorandum of Understanding, sign and brochure design, distribution of educational material, and the development of a prevention strategy within the State of Utah. Staff have also produced educational materials including posters, mailer inserts, and a peer reviewed publication on the Glen Canyon Zebra Mussel Prevention Program.



Zebra Mussel

The Zebra Mussel Prevention Program began in 1999 and continued through 2002. This program is recognized as one of the most proactive efforts in the western United States. Thirty-one boats entered Glen Canyon NRA that had recently been used in states infested with Zebra Mussels. Twenty-two of the 31 boats redeemed coupons, provided by the program, for a free boat washing provided by Aramark to remove zebra mussels and other exotic species. As many as ten boats identified as a threat may have launched on Lake Powell

without being cleaned, presenting a clear threat of introduction of the organism into Lake Powell. Staff produced text to be added to the Superintendent's Compendium making the washings mandatory. The text is currently being examined by the NPS solicitor.

The monitoring program to detect the existence of Zebra Mussels in Lake Powell has been improved by using artificial substrate samplers. The samplers will allow detection of settling stage zebra mussels. Prior to the use of artificial substrate samplers, only adults could potentially be detected. There have been no live Zebra Mussels found in Lake Powell yet.

In April of 2002, the Aquatic Ecologist was in Bullfrog to educate Aramark employees about the threat of zebra mussels and the proper methods for washing boats. The Aramark employees recalled that a boat from Wisconsin had recently been launched on the lake. Upon inspection of the boat, zebra mussels were discovered attached to the trim tabs. The owner of the boat was contacted and, fortunately, the boat had been out of water for nine months prior to being launched on Lake Powell. Although nine months out of the water will certainly kill the zebra mussels, the boat was pulled and washed. This incident illustrated the reality of the threat zebra mussels pose to Lake Powell.

To increase awareness of zebra mussels and other aquatic nuisance species threats to Lake Powell, the Aquatics Program has begun the Zebra Mussel Prevention Task Force (ZMPTF). The ZMPTF is made up of interested businesses and individuals in the Page area who are concerned with aquatic nuisance species threats to Glen Canyon NRA. Meetings are held periodically for information exchange and development of ideas to reduce the threat of exotic invasions. Through the ZMPTF a great deal of educational material has been distributed to users of Lake Powell, signs and posters are displayed in many businesses around the lake, two radio interviews have aired, and video public service announcement are being played in a local coffee shop.

Staff gave presentations on the threat of zebra mussels to western waters and the prevention program at Glen Canyon NRA to a wide range of audiences including the Navajo Generating Station, Biennial Conference on Research on the Colorado Plateau, American Frontiers Public Lands Journey, Bureau of Reclamation in Las Vegas and Lake Mead NRA, and the Lake Mead Water Quality Forum. As a result of the presentations Lake Mead NRA is attempting to begin a prevention program modeled after the Glen Canyon program and information was requested by Yellowstone NP regarding the prevention program.

In April 2002, the Aquatic Ecologist identified the New Zealand Mudsnail (NZMS) in the Colorado River below the Glen Canyon Dam. This invasive exotic species has been documented passing through the digestive system of trout undamaged. The NZMS out competes other aquatic invertebrates for food and space. The end result is a greatly reduced invertebrate fauna that provides very little energy to higher trophic levels. Impacts to the “Blue Ribbon” trout fishery below the dam are already evident. Examination of voucher specimens from invertebrate monitoring by the



Colorado Mud Snails

GCMRC proves that the NZMS has existed in the Colorado River below Glen Canyon Dam since at least August of 1995. The snail had been misidentified for seven years. In 2000, NZMS density at Lees Ferry peaked at over 40,000 snails per square meter. Currently there are no feasible methods for removal. The Aquatic Ecologist has been designated as the NPS lead on NZMS issues.

Fisheries

Sport fishery management at Glen Canyon NRA is accomplished through an integrated, interagency cooperative effort between the Utah Division of Wildlife Resource (UDWR), Arizona Game and Fish Department (AG&F), and the National Park Service.

Sport fisheries of Lake Powell were healthy for the 2002 season. Since the 1980's, the striped bass population in Lake Powell has gone through cycles of boom and bust in a classic predator-prey interaction with threadfin shad. Infrequent peaks in the shad population cause the striper population to increase until the shad population is eliminated from the pelagic zone, leaving the striped bass with insufficient forage. Angler harvest is used as the primary tool for controlling the striped bass population to keep the fish in good condition. There is no creel limit on striped bass in Lake Powell and all anglers are asked to keep all striped bass caught.

During recent years, the smallmouth bass population has increased. Smallmouth bass also feed on shad. Competition for limited forage resources has caused a slow down in smallmouth growth. New regulations imposed in 2002 increase the creel limit on smallmouth bass from 6 to 20 in possession. It is hoped that the increased limit will increase angling mortality to keep smallmouth populations under control. With no limit of striped bass and the increased limit for smallmouth bass, Lake Powell may have the most liberal creel limits in the U.S.

A gizzard shad was first collected from Lake Powell in the San Juan inflow area on June 6, 2000. No additional gizzard shad were found until August of 2002 when Utah Division of Wildlife Resources personnel collected six from the San Juan arm. The effects of gizzard shad in Lake Powell are unknown. Gizzard shad may improve the sport fishery by providing another forage source. They may also severely impact the threadfin shad population. Gizzard shad quickly grow beyond the prey size threshold for all but the largest of the predators. This could mean that gizzard shad will provide a more stable food source by virtue of maintaining a large brood stock to replenish forage for bass, or the gizzard shad may become too large to serve as forage and begin to compete with bass for the already limited food resources.

The rainbow trout fishery in the tailwaters of the dam has seen low production for the last several years. There are high population numbers, but growth rates are very low. Very few large fish that characterized the fishery in previous years now exist. The average trout size in the 1970s and 80s was over 16 inches; today the average size is less than 12 inches. In 2002, AG&F proposed new regulations to reduce numbers and increase size of

trout. Reduction in trout production may be largely due to the infestation of the Colorado River below Glen Canyon Dam with the NZMS.

Entomology

Macroinvertebrate sampling was conducted in Bowns Canyon, the Waterpocket Fold, and the Escalante River. The samples are sorted and identified by the Bureau of Land Management Aquatic Ecosystem Laboratory in Logan, Utah, and a report is submitted to Glen Canyon NRA. Sample sorting and identification is completed at no charge to Glen Canyon as part of a cooperative agreement with the Laboratory. The reports produced for each set of samples includes a species list with species abundance and suite of indices calculated. Macroinvertebrate data over time allows analysis of trends in ecosystem health.

Colorado River Terrace Photo Monitoring

Throughout 2002, staff maintained two automated cameras on the river below the dam. Located at 9.8 and 0.5 miles upstream from Lee's Ferry, these cameras are programmed to take a picture each day of beach and terrace areas to monitor for changes. The project began in 1992. During the summer of 2000, photos were sent to Northern Arizona University for analysis. A final report of the findings is expected in January of 2003. Monitoring will be continued through 2003 at least until the report can be evaluated.



Terrace below Glen Canyon Dam

Lake Powell Cooperators Group

The Lake Powell Cooperators group has met each year since 1990 for information exchange and fostering partnerships between agencies active on Lake Powell. Formalized by a memorandum of understanding in 1998, signatory agencies include the National Park Service, U.S. Geological Survey, U.S. Bureau of Reclamation, U.S. Fish and Wildlife Service, U.S. Environmental Protection Agency, Utah Division of Water Quality, Utah Division of Wildlife Resources, Arizona Water Quality Division, Arizona Game and Fish Department, and Navajo Nation Environmental Protection Agency. Other participants include U. S. Bureau of Indian Affairs, U.S. Coast Guard Auxiliary, Utah Department of Environmental Quality, Utah Department of Health, Utah Parks and Recreation, Southwest Utah Public Health Department, Arizona Department of Environmental Quality, Coconino County Department of Health, Grand Canyon Monitoring and Research Center, Northern Arizona University, Utah State University, University of Utah, Page High School, Navajo



Generating Station, and ARAMARK. Current efforts of the group are focused on developing a universally accessible data platform to serve all cooperators and determining of shared information needs to promote cooperative efforts between agencies.

CULTURAL RESOURCES

Parkwide Condition Assessments

A two-year WASO initiative for condition assessment and evaluation of selected sites was completed this year. Twenty-eight sites out of a total of 156 randomly selected for this park were re-visited and reported on. Overall, a total of 53 sites in the park were identified or re-recorded, with new information entered into the ASMIS database.

Grand Canyon Monitoring and Research Center (GCMRC)

A GLCA seasonal Archeologist provided logistical support and assisted WACC in the testing of prehistoric site AZ:C:2:40 located at Three Mile Bar below the dam. Limited excavation revealed no subsurface deposits and limited data potential, and the site will be recommended as Not Eligible for the National Register of Historic Places upon completion of the final report.

Graffiti Removal Project

Funding for this 2-year fee demo project was exhausted in FY02, although a request for new funding will be submitted in December. Considered highly successful, this project resulted in the removal of approximately 1340 square meters of graffiti throughout the park, utilizing over 1625 hours of volunteer labor and the cooperative efforts of the Resource Management and Interpretation Divisions. An Interpretive Ranger was hired specifically for this program and he spent part of his time roving and educating visitors in graffiti impacts and part of his time organizing and coordinating groups for graffiti removal.

Lees Ferry/Lonely Dell Ranch Stabilization

Nearly half of the \$400,000 GRCA fee demo funds allotted to this project were expended in FY02 for stabilization of 6 structures. Work completed by crews from the Historic Preservation Training Center and from Mesa Verde included roof replacement, relaying stone elements, chinking, window refurbishing, and repainting. Phase 2 of this project will be completed in FY03.

Compliance

Numerous projects were reviewed by the cultural staff for potential resource impacts. Two of these required fieldwork: the Wastewater Treatment plant upgrade and the Page

One Land Exchange. Over 400 acres were surveyed; two sites were located, one was avoided by project redesign. The Park Archeologist participated in reviews of the PWC EIS and a BLM grazing allotment EA, and completed work through contract on the Hite DCP archeological survey and the Lone Rock/Hwy 89 junction upgrade. An HSR/Determination of Eligibility was started on the stone cabins at Wahweap Trailer Village.

Curation

Gwen Gallenstein from the Flagstaff Group visited the park this summer and accessioned and cataloged 50 new objects. She also completed end-of-year reports and updated files. The new upgrade for computer management, ANCS+, was installed this year. Cultural staff will attend training in January on how to use the new system. The Minnie McFarland slide collection, containing several hundred photos, was organized, labeled, and placed into protective sheets. Pots and other objects on display at Bullfrog VC were removed due to security issues. Max King is working to have replicas made.

Lees Ferry Object

An inscribed lead sheet was found inside a historic structure at Lees Ferry. In addition to text referencing the Mountain Meadow Massacre and church leader Brigham Young, it bore the signature “J.D.Lee.” Preliminary forensic examination indicated that although it was not possible to state “positively” whether the object was authentic, the evidence was “overwhelming” that the historic figure John D. Lee “...did NOT inscribe the lead plate...” (letter report from Independent Forensic Laboratories to Christine Goetze, dated May 6, 2002). However, additional lead metallurgic analyses recently ongoing do indicate a strong probability for pre-Civil War extraction for lead used in the sheet (Tom Brunty, ASU, Dept. of Religion, personal communication). Overall, analyses have been inconclusive.

Database Management

The ASMIS site database was created for this park this year by WACC employee Steve Baumann. It was installed in May and archeologists received appropriate training. Materials from 500 site files were driven to WACC for scanning into the ASMIS database. This work is completed and the files will be picked up in the near future. A trip is planned for WACC staff to visit the park and provide instruction on use of the database. Forty-four new and 38 updated site records were also entered into the ASMIS and IMACS database and sent to the SHPO for determination of eligibility.

Training

The cultural seasonal received boat handling and fire fighting training. The Park Archeologist maintained an active role in the Vanishing Treasures program, and attended

coordination meetings as needed. She went to LCS/ASMIS training in August, participated in Interpretation training in May and June, and attended LE training in December.

TERRESTRIAL PROGRAM

Resource staff continued inventory, monitoring and management activities addressing vegetation and flora, threatened and endangered species, wildlife, exotic (invasive) plant species, and grazing management. The Wildlife Biologist/Botanist and staff completed the following:

Management

- ? Chaired morale and awards subcommittee and prepared report for Superintendent.
- ? Represented the Resource Management Division on the Glen Canyon NRA EEO committee.
- ? Prepared JHA on backcountry camping and travel.

T&E Species

- ? Continued baseline surveys of bald and golden eagles in Glen Canyon NRA, December-February (see Figure 1).
- ? Coordinated with the Bureau of Land Management and U.S. Fish & Wildlife Service on a *Pediocactus bradyi* recovery plan.
- ? Monitored *Cycladenia jonesii* at Purple Hills, June 25-27.

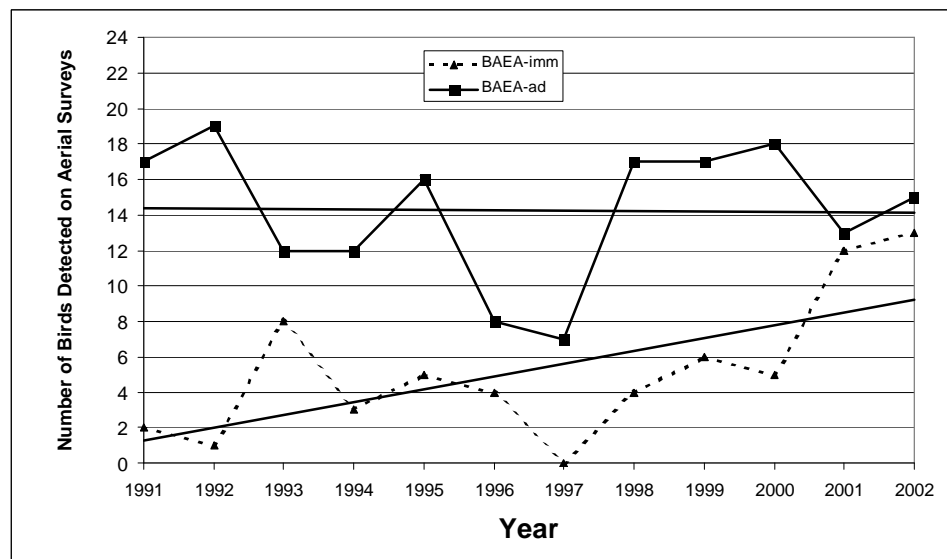


Figure 1. Number of Bald Eagles detected on January surveys between 1001 and 2002.

Exotic plants

- ? Control of Russian knapweed at Halls Crossing and Lees Ferry continued, with all aboveground shoots eliminated.

- ? Work with private contractors and the Grand Canyon Wildlands Council on a tamarisk control project at Lees Ferry has been continued. Irrigation of native plantings was continued.
- ? Worked with Visitor Protection on Russian olive control in the Escalante Subdistrict.
- ? Participated in Russian olive control with Wilderness Volunteers on the Escalante River, May 4-11.
- ? Re-organized herbicide storage and purchased proper storage facilities, updated MSDS sheets.
- ? Prepared proposal to National Fish and Wildlife Foundation on establishing a native plant propagation greenhouse program at the Page School System (\$49,000).
- ? Co-author on Colorado Plateau Exotic Plant Management Team proposal, to be funded in FY2003 (\$1,500,000).

I&M Projects

- ? Completed the annual Lake Powell water bird survey in January.
- ? Conducted the third annual Glen Canyon Christmas Bird Count, 3 January.
- ? Finalized and distributed a comprehensive annotated checklist of the birds of Glen Canyon NRA, documenting the occurrence of 311 species.
- ? Provided support and expertise to the southern and northern Colorado Plateau Network inventory and monitoring programs currently underway.
- ? Finalized draft final report on the seeps and springs along the Colorado River in Arches NP, Canyonlands NP, Glen Canyon NRA, and Grand Canyon NP.
- ? Surveyed three new canyons for T&E and special status species; Llewellyn Gulch, Bishop Canyon, Coyote Gulch. Discovered 15 new populations of rare plant species during surveys, including populations of *Cystopteris fragilis*, *Galium aparine*, *Mahonia repens*, *Platanthera zothecina*, *Rhus glabra* and *Viola nephrophylla*.

Research Projects

- ? The last year of a 4-year research program on determining effective methods of monitoring livestock grazing impacts was completed, with sampling of sites on relict mesa tops.
- ? Fieldwork for the Central Utah Project on characterization of Glen Canyon riparian vegetation was continued.

Data Management – Prepared Access Databases

- ? spring chemistry, 113 records.
- ? spring physical sites data, 132 records
- ? spring vegetation, 2,473 records
- ? riparian and wetland sites, 113 records
- ? riparian and wetland vegetation, 1,154 records
- ? amphibians, 15 records
- ? golden and bald eagle sightings, 1,092 records
- ? lake waterfowl sightings, 2,531 records
- ? upland sites, 80 records
- ? upland vegetation, 1,340 records

- ? updated bird observation database, 3,810 records

Training, presentations and meetings

- ? Attended vital signs monitoring scoping session for southern and northern Colorado Plateau networks, December 24-26.
- ? Attended Sustainable Rangeland Roundtable meeting, January 9-10, Tucson.
- ? Presented talk on terrestrial program as part of adjunct duties, Department of Biology, Northern Arizona University, February 22.
- ? Attended three-park resource management meeting in Sedona, March 5-7.
- ? Attended seventh annual bryophyte workshop at Hopland Research Station, California, March 22-27.
- ? Presented Glen Canyon NHA lecture series lecture on the wildflowers of Glen Canyon NRA, April 3.
- ? Taught bird monitoring techniques at Tehabi Short Course in Ely, NV, May 17-20.
- ? Attended Arizona Important Bird Area program meeting in Phoenix, July 24-26.
- ? Attended Utah Ornithological Convention, Ogden, August 23-24.
- ? Attended curation of natural history specimens workshop in NPS, Washington DC, September 23-27.

Professional Activities

- ? Manuscript reviewer for the scientific journals **The Bryologist**, **Journal of Bryology**.
- ? Served as editor of **Utah Birds**, the journal of the Utah Ornithological Society. Oversaw publication of Volume 16, Issue 1, 2001.
- ? Continued work on treatments for upcoming Arizona Breeding Bird Atlas, including species accounts for Hermit Thrush, Townsend' Solitaire, Western Bluebird, Mountain Bluebird, and Northern Flicker, and the chapter on the vegetation of Arizona.
- ? Co-author on presentation entitled "Southwestern spring vegetation: biogeography, human impacts and restoration", with L.E. Stevens and V. Meretsky, August 2002, at Ecological Society of America meetings in Tucson.
- ? Represented NPS and Glen Canyon NRA on the national Sustainable Rangeland Roundtable effort.
- ? Represented the National Park Service on the scientific review committee for the Arizona Important Bird Areas program

Publications

- ? Spence, J.R. 2002 "Spring-supported vegetation along the Colorado River, Colorado Plateau: floristics, vegetation structure and environment". In Meretsky, V. and L.E. Stevens (eds.). **Springs of the American Southwest, ecology and management**. University of Arizona Press, Tucson (to be published in 2003).
- ? Spence, J.R. and H.P. Ramsay. 2002. The genus *Anomobryum* in Australia. **Telopea** 9: 777-792.
- ? Jessup, S., Shevock, J., Stark, L., Spence, J. and Doyle, W. 2002. Bryophytes of the Santa Margarita Ecological Preserve, California. **Evansia** 19: 1-7.

- ? Spence, J.R. 2002. *Roellia* treatment. Bryophyte Flora of North America. Draft treatment. Website: www.buffalomuseumofscience.org/bfna/bfnamenu.htm
- ? Spence, J.R., B.K. Russell and W.B. Tug Kangus. 2002. Bald Eagle surveys at Glen Canyon National Recreation Area, Utah and Arizona, 1991-2002. **Utah Birds** 16: 12-22.
- ? Spence, J.R. and B. Bobowski. 2002. 1994-1997 water bird surveys of Lake Powell, a large oligotrophic reservoir on the Colorado River, Utah and Arizona. **Western Birds** (in press).

RANGE ECOLOGY

The year has been characterized by cooperative efforts to address rangeland health issues throughout Glen Canyon NRA. Regular duties included working closely with the Bureau of Land Management (BLM) to evaluate rangeland health conditions and develop or review many environmental assessments. Additionally, there have been some specific accomplishments that have strengthened existing partnerships and developed new ones. Many projects that have been initiated and completed during the year have assisted in the protection or improvement of cultural and natural resources of Glen Canyon NRA. Below are some highlights:

The Range Ecologist, Dr. Ben Bobowski, left Glen Canyon NRA in March 2002 for a new job as Chief of Resource Management at Grant Kohrs NHS. The Wildlife Biologist/Botanist took over as acting Range Ecologist in March 2002:

- ? Organized and conducted an interagency meeting addressing grazing issues on Glen Canyon NRA. Participants included the Bureau of Land Management (BLM) from the St. George, Escalante, Kanab, Hanksville, Richfield and Monticello offices. During this meeting we summarized grazing activities and set agendas for the calendar year 2002.
- ? Successfully prepared and completed an interagency field course sponsored by USU, BLM, and the NPS. This two-week course addressed the cultural, natural, social, political, and economic issues of the resources of the Ely, Nevada area of the BLM. Three student interns who completed this course worked at Glen Canyon NRA for the summer.
- ? Instructed, supervised, and mentored three interns (one at Page; one at Bullfrog) on a project that addressed management issues of shared allotments between the BLM and NPS. Students prepared draft Environmental Assessment for the Perkins Brothers allotment. The interns collected extensive field data as part of this effort. The internships were sponsored by Tehabi of USU.
- ? Worked cooperatively with the BLM to address the rangeland health issues of the Kaiparowits Plateau. This was (and continues to be) an intensive effort to remove livestock and to restore the condition of the rangeland. The WASO Water and

Biological Resources Divisions completed resources assessments and drafted a report finalized in March 2002. This report documents the resource condition and may lead management to the conclusion that there is impairment on the plateau. This assessment resulted in the Superintendent requesting BLM to discontinue issuance of a permit for this area due to resource impairment.

- ? Completed most field work and data collection and literature searches on two projects, the ecological history of Glen Canyon NRA rangelands, and data synthesis for natural and cultural protections issues relating to livestock grazing management.
- ? Continued to participate in the national-level Sustainable Rangeland Roundtable at three meetings in Tucson. Ben participated as a principal author on the working group to develop indicators of rangeland primary and secondary productivity.
- ? Staff collected and organized range activities and range data for a FOIA request by the Land and Water Fund of the Rockies on the Sewing Machine, Rockies, Last Chance Creek, Lake, and Rock Creek-Mudholes allotments.

GEOGRAPHIC INFORMATION SYSTEM AND DATA MANAGEMENT

Administration

- ? Page One land exchange congressional mapping and survey project. Approximately 25 modeled land exchange scenarios were produced and reviewed for the Glen Canyon NRA/Page One Land Exchange project. This was accomplished through cooperation with the Bureau of Land Management and NPS Realty Specialists.
- ? Power Site Reserve research conducted. An extensive power site and water site reserve research project was conducted. The Antelope Point Development area was found to have state and federal power site and water site rights to Antelope Point. Lobbying was sought for mitigation.
- ? Security Zone maps were created delineating a Glen Canyon Dam security zone. GPS data were secured identifying the security zone for the protection of Glen Canyon Dam. After September 11th, Glen Canyon Dam was deemed a high risk to terrorist attack. Maps were generated and additions to the Federal Register were made.
- ? Reproduced Aerial Map of Glen Canyon Dam. Produced a high quality, high resolution aerial photograph of Glen Canyon Dam for Bureau of Reclamation offices at Glen Canyon Dam visitor center.
- ? Produced enhanced virtual 3D fly over of Kaiparowitz Plateau and Navajo Mountain. Created new flight lines for presentation to park staff and park visitors.
- ? Produced PWC maps for display. Produced a series of maps and posters in support of PWC public meetings.
- ? Participated as an alternate on the Glen Canyon EEO committee.

Concessions

- ? Produced Antelope Point bathymetry data set. Reprojected and exported bathymetry data to contractors in support of the Antelope Point Development Project.

Cultural Resources

- ? Updated Parks Cultural CSI GIS Database. Converted current CSI Cultural database to Arc/Info and ArcView formats.
- ? Produced Hole-in-the-Rock Road photo maps for Archaeological Cultural Clearance.
- ? Produced Kaiparowits Plateau photo and aerial maps for conducting archaeological survey.
- ? Produced photo maps with GPS grid zones with previous survey data for archaeological survey of the Kaiparowits Plateau.
- ? Produced maps from GPS survey of Orange Cliffs historical sites. A GPS survey was conducted of the Orange Cliffs area of all known historical sites.
- ? Produced GIS model delineating cultural buffer impact zone of Personal Watercraft use area around Lake Powell.
- ? Produced soils and vegetation map analysis of archaeological sites of Slickrock Canyon.
- ? Produced Lees Ferry Fort lead plate display photo. Color corrected and blew up photo of JD Lee historic lead plate.
- ? Reproduced graphics of Antelope Point development area for Navajo Liaison chapter meetings.
- ? Procured \$28,000 for cataloging and accessioning Aerial Photo Collection.

Information Technology

- ? Represented the Division of Resources Management on the IT committee. This included regular meeting attendance and IT plan reviews and Resources Management IT recommendation.

Natural Resources

- ? Imported 90 NLAPS Multispectral Image Layers. Reprojected, feather edgematched, mosaiced and clipped all imagery. Created several vegetation classifications for the identification of exotic plant species.
- ? Reprojected color infrared imagery and performed a series of unsupervised vegetation classifications for the Colorado River corridor between Glen Canyon dam and Lees Ferry.
- ? Converted and merged historic BOR, USGS and 1994, 1995 GLCA springs databases. Data from 78 USGS 7.5 Minute Quadrangle maps were merged with historic Bureau of Reclamation springs data and 3 years of Glen Canyon NRA GPS

surveys to produce a final coverage of all known seeps and spring sites within Glen Canyon NRA.

- ? Created GIS coverage for T&E plant database. Converted current Threatened and Endangered Species database to Arc/Info and ArcView formats.
- ? Created riparian spring zonal map (Side Canyon Study).
- ? Produced data sets and photo maps for Kaiparowits grazing survey .
- ? Produced park grazing maps.
- ? Lake Powell bathymetry update conducted.. Field survey was conducted for the purpose of quality assurance of the Glen Canyon NRA bathymetry dataset. A GPS survey was conducted followed by a correction project and reprocessing and merging of 75 miles of Lake Powell - San Juan portion.
- ? Attended I&M Data Management Training. Participated in one week of training covering National Park Service data management software systems. Program instruction included NPSpecies, Synthesis, Arc Catalog, Microsoft Access, Oracle and ArcView softwares.
- ? Antelope Point EA Graphics Support. Color corrected and reproduced Antelope Point graphics for Environmental Assessment.

Interpretation

- ? Produced area/site maps of Glen Canyon NRA and Navajo National Monument.
- ? Graphics/Color Support: Provided printing and graphics support for various Interpretation projects including the new Camping flyer, Park Newspaper, Dinosaur Posters, Savannah Water Quality Posters, Coastal Cleanup Day Poster, Halls Crossing Historical Poster, Glen Canyon NRA Brochure Map, Boating Equipment Poster/PFD, Geology Poster and Carbon Monoxide Posters.

Fee Collection

- ? Produced Fee Collection sign graphic for fee booths.

GIS

- ? Updated Park Boundary Map at Page and Antelope Point
- ? Initial conversion and assessment of NAVA GIS Coverages was conducted.
- ? Conducted federal mineral lease applications reviews.
- ? Conducted GPS bathymetric survey of Castle Rock Cut.
- ? Incorporated Utah State Oil and Gas, Cadastral Survey, and Public Land Survey datasets into Glen Canyon NRA GIS.

Facilities

- ? Antelope Point Survey - Created GIS coverages for Glen Canyon NRA and Cadastral Survey of Antelope Point development survey project. Included scoping, boundary search, planning, GPS survey and planning maps.

- ? Conducted GIS planning/GPS survey of rock quarry sites w/maps and statistics for Professional Services.
- ? Reproduced visitor zoning and PWC maps.
- ? Reproduced PWC EIS graphics for public meetings.
- ? Produced area maps of Lake Powell access points.
- ? Reprojected and exported GIS data layers to Parsons Engineering firm.
- ? Digitally reproduced and color enhanced Glen Canyon NRA brochure.
- ? Statistical Assessment of potential Antelope Point Marina location.
- ? Conducted GPS survey of Wahweap well heads including statistics and maps.
- ? Conducted Glen Canyon NRA Bike Trail mapping review.
- ? Rainbow Bridge dock relocation mapping/assessment.
- ? Color corrected and reproduced Bullfrog Housing Master Plan.

System Administration

- ? Upgraded Trimble GPS software and firmware.
- ? Upgraded CMT GPS software.
- ? Configured and incorporated bathymetric mapping software (Windmill).
- ? Programmed ArcView graphical user interface with new tools and data access points.
- ? Installed and tested new ArcPad Software v. 6.0.
- ? Maintained UNIX software and hardware.

Visitor Protection

- ? Created security zone maps for homeland security and federal register.
- ? Conducted extensive GPS survey of Glen Canyon Dam Home Land Security Zone and produced maps for law enforcement officers, rangers and dispatch.
- ? Produced coverages, maps and analysis for SAR team in support of body recoveries.
- ? Produced demonstration package for law enforcement body recovery training.
- ? Conducted extensive GPS Survey of Lone Rock Beach including photo maps.
- ? Digitally reproduced and color corrected Stan Jones Guide map for dispatch control center.
- ? Produced map for State Game and Fish Court Case.
- ? Produced maps of Wahweap Marina development area in support of Glen Canyon NRA fire plan.

RESEARCH PROJECT ORGANIZATION

Glen Canyon NRA Research Study Proposal (RSP) project files contain 306 entries for natural, cultural, or paleontological projects either ongoing or completed. Included in this number are twenty projects conducted by park staff. Twenty projects were conducted

along the Colorado River in both Grand Canyon NP and Glen Canyon NRA as part of the Grand Canyon Monitoring and Research Center (GCMRC) program.

Research Permitting

Through the service-wide web-based research permitting process, nine research permits were issued in 2002.

Fish Management Plan

The plan was reaffirmed in 2002.

Glen Canyon Dam Adaptive Management Program

Glen Canyon NRA continued to participate as a member of the Technical Work Group and attended Adaptive Management Work Group meetings.

San Juan River

The NPS continues as a cooperator with the Bureau of Reclamation in the preparation of an EIS and plan to re-operate Navajo Dam. The re-operation was necessary to benefit native fish downstream of the dam. The re-operation will reduce flows at certain times, which will cause impacts to river recreationists. A complete analysis of this change is needed in the EIS. The final EIS and plan was not released in 2002.

Colorado River Interim Surplus Criteria

Surplus water criteria for the Colorado River were completed in January 2001. These criteria will allow California to continue to obtain Colorado River water for the next 15 years under prescribed circumstances in excess of its compact allocation of 4.4 maf. During this 15 year period California will implement conservation measures and transfer agreements such that its reliance in water above its prescribed allocation will not be necessary. An EIS was written to analyze the environmental consequences of the various water allocation plans. The proposal has the potential to affect various NPS resources in three national park areas since it will lower water levels in the two reservoirs and affect the flows between lakes Powell and Mead.

Of great concern is the effect of the lowered lake levels on the frequency of beach habitat building flows (BHBF) through Glen Canyon and Grand Canyon. Because of intense negotiations, the NPS interjected a specific mitigation strategy to counteract a reduction in potential. A BHBF test flow program was included in the ISC Record of Decision that will be developed and implemented through the Glen Canyon Dam Adaptive Management Program. The test flow program will consist of a series of flows outside the hydrologic triggering criteria and will be implemented over the next 15 years. It is expected that the program will develop information on how best to use BHBF flows to

benefit downstream resources in Glen Canyon and Grand Canyon. The Record of Decision also requires BOR to fulfill 106 and 110 responsibilities which requires mitigation when sites are exposed below 3708' elevation. Continued draught has impacted this program as surplus water is rapidly disappearing.

Rainbow Bridge National Monument (NM) Water Rights

The Water Rights staff in the Water Resource Division worked with Glen Canyon staff to develop text of the water rights agreement with the State of Utah regarding water in Rainbow Bridge NM. All Rainbow Bridge Consultation tribes have reviewed the text. The agreement was signed in January 2002.

AMERICAN INDIAN LIAISON

Ongoing Cultural Projects

Liaison and coordination between park managers and park affiliated tribe/nation governments, their communities and people continues throughout the year to accomplish consultation, understanding, and information exchange.

The Antelope Point Marina Development:

- ? Meetings among NPS, Navajo Nation, NTUA, and LeChee Chapter to discuss the proposed operation.
- ? Navajo Nation Economic Development Division held meetings at LeChee Chapter.
- ? Environmental Assessment public hearings required contact and coordination with affiliated chapters.
- ? Meeting with the developer to bridge communication and information exchange.

The proposed Hite Marina Development Concept Plan (DCP): The initial contact with the affiliated tribes had begun when the project was put on hold.

The Colorado River Recreation Management Plan (CRRRMP) at Lees Ferry was also put on hold. Several contacts were made with Navajo Nation chapters and more contacts will need to be made.

Personal Watercraft (PWC) issue for the Glen Canyon National Recreation Area and Rainbow Bridge National Monument had been addressed through affiliated tribal contact.

Information had been distributed to each tribe for conducting an environmental impact statement (EIS) under the requirement of the National Environmental Policy Act (NEPA), preparing an economic analysis, and seeking public comments throughout the entire process.

The Wahweap Development Concept Plan will be updated and preparation for tribal contact and coordination will be initiated in December 2002.

Liaison Assistance To Other Parks And Agencies

Capitol Reef NP drafted tribal affiliation ethnography studies on Hopi and Navajo Nation. Assistance was provided with follow-up meetings among Navajo Mountain individuals interviewed during the project and to distribute the final report.

Department of Justice-Voters' Rights Program requested help from American Indians who are bilingual in Navajo/English languages. Implementation of the Civil Rights Act required observations of ballot polling sites on Indian Reservations that were targeted with concerns of deficiency.

Denver-Intermountain Region, National Park Service-American Indian Trust Responsibilities was vacated by Barbara Sutteer and Dr. Cyd Martin was selected for the position. Before Dr. Martin began her duties of any tribal interactions, she invited Pauline and Barbara on an orientation trip into Montana to meet with tribes.

Other

The Navajo Nation Tourism Department hosts quarterly meetings that Pauline attends for exchange of information about tourism in other parts of the region.

Pauline continues as the Special Emphasis Program Coordinator and attends the park's Equal Opportunity (EO) committee meetings.

The Page Unified School District has an Indian Education Program that Pauline has been involved with and assists with the Navajo Language program in the school. She is often invited to other school activities and functions.